DOCUMENT RESUME

ED 037 996 EM 006 140

AUTHOR	Comstock, George; And Others
TITLE	The Volunteers. The Peace Corps Educational Television (ETV) Project in Colombia: Two Years of Research.
INSTITUTION	Stanford Univ., Calif. Inst. for Communication Research.
SPONS AGENCY	Peace Corps (Dept. of State), Washington, D.C.
PUB DATE	Nov 66
NOTE	170p.; One of a series of 12 Peace Corps documents. See also: ED017185, ED020663, ED020664, ED020665, ED020666, ED020667, ED020668, ED020669
EDRS PRICE	EDRS Price MF-$0.75 HC-$8.60
DESCRIPTORS	*Changing Attitudes, *Developing Nations, *Educational Television, *Volunteers
IDENTIFIERS	Colombia, Peace Corps

ABSTRACT

For this report on a two-year Peace Corps project designed to implement educational television (ETV) into Colombia schools, the Peace Corps Volunteers who participated are investigated. The history and experience of these Volunteers in the Peace Corps are sketched first. Next, the consequences for them of serving in a large, integrated, special purpose project such as ETV are considered; this discussion leads to the special problems such a project raises for the Peace Corps, and what can be done about them. Following that is a section which examines and analyzes some findings on Volunteer attitude change during service, including an examination of the Volunteers' views, attitudes, and opinions regarding their Peace Corps training, the ETV project, and the Peace Corps. A concluding section details some findings on the changing perspectives of Volunteers during their first and last months of service, usually considered to be especially busy periods of psychological readjustment, which have some implications for Peace Corps training. (Author/SP)

ED037996

THE PEACE CORPS EDUCATIONAL TELEVISION (ETV) PROJECT IN COLOMBIA -- TWO YEARS OF RESEARCH

Research Report No. 9:

The Volunteers

By George Comstock, Nathan Maccoby,
and Patricia Comstock

a report of the
INSTITUTE FOR COMMUNICATION RESEARCH
STANFORD UNIVERSITY

ED037996

U.S. DEPARTMENT OF HEALTH, EDUCATION
& WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

THE PEACE CORPS EDUCATIONAL TELEVISION (ETV) PROJECT IN COLOMBIA -- TWO YEARS OF RESEARCH

Research Report No. 9:

The Volunteers

By George Comstock, Nathan Maccoby,
and Patricia Comstock

EM006 140

CONTENTS

Page

Introduction 1

Background 2

Organization of the Report 3

Part I: An Overview of the Volunteer Experience 5

- The Volunteers in ETV 6
- Project Characteristics and Volunteer Performance 19
  - Project Characteristics 20
  - Special Problems 25
  - What Can Be Done 32
  - Summary and Discussion 45

Part II: Some Findings on Volunteer Attitude Change 47

- Data-Gathering and Analysis 47
  - The Questionnaire 48
  - The Factor Analysis 51
  - The Change Analysis 54
- The Results 58
  - A Recapitulation of the Changes in Attitudes and Perceptions 82
  - Change of Another Kind 85

Part III: Some Findings on Shifts in Volunteer Perceptions During the First and Last Months Overseas 87

- Data-Gathering and Analysis 88
- The Results 93
  - Differences Between the Amount and Focus of Changes in Perspective 112

CONTENTS continued

Page

Changes During the Last Months of Service 118

Changes During the First Months of Service 122

General Orientation of the Replacement vs. the Original Volunteers 129

Summary and Discussion 130

Part IV: The Volunteers -- Summary and Discussion 136

Footnotes 143

Appendices 144

A: The Initial Volunteer Questionnaire 144

B: Semantic Differential Instructions and Rating Form 156

C: Matrix of Volunteer Questionnaire Item Loadings on Extracted Factors 160

Reports In This Series at end

Brief Facts: The ETV Project, and The Research at end

This research was conducted under Peace Corps Contract No. W-276, entitled, "To Provide Continuous Information on the Effectiveness of the Peace Corps Educational Television (ETV) Project in Colombia." This is one of 12 volumes in a series, The Peace Corps Educational Television Project in Colombia--Two Years of Research. Titles of the other volumes and some brief facts on the ETV Project and on the research can be found at the end of this report.

More than 140 Volunteers served in the Peace Corps Educational Television (ETV) Project in Colombia while we were in the country conducting our field studies on the project. These Volunteers are involved in one way or another in all of our research because it is Volunteers who carry out Peace Corps undertakings. However, in this report we focus on them in a direct and special way as Volunteers.

We will begin by sketching the history and experience of these Volunteers in the Peace Corps. Then we will consider the consequences for them of serving in an unusual but not unique kind of operation for the Peace Corps -- the large, integrated, special purpose project, which the ETV Project exemplifies. This will lead us to the special problems such a project raises for the Peace Corps, and what can be done about them. We will then examine some findings on Volunteer attitude change during service, which will include an examination of the Volunteers' views, attitudes, and opinions regarding their Peace Corps training, the ETV Project and the Peace Corps. Finally, we will turn to some findings on the changing perspectives of Volunteers during their first and last months of service, usually considered to be especially busy periods of psychological readjustment, which have some implications for Peace Corps training. We will also give some attention to the kinds of people especially suited for service in an instructional television project of this kind. Some of the data will come from questionnaires and similar objective measuring instruments; some will come from interviews; and some will come from our many conversations and long association with the Volunteers.

Background

Our association with Volunteers in the ETV Project has spanned three years, and for two years we were in close and daily involvement with them in Colombia. It began when one of the authors (Maccoby) visited the University of New Mexico training site of a large group ("Colombia XIII") of the first ETV Volunteers in September, 1963, to confer with Peace Corps staff involved in the Project and interview Volunteers. It has continued to the present (the end of 1966) since we have maintained contact with some of the former Volunteers who were in the first ETV contingent and with Volunteers currently serving in the project after ending our field studies.

The most important segment is the two years of our field study in Colombia. Two of the authors (Maccoby and George Comstock) arrived in Bogota, Colombia's capital and the headquarters for the ETV Project, at the beginning of the third week in January,1964. This was about two weeks after the last of the more than 80 Volunteers assigned to inaugurate the project had arrived ("Colombia XIII"), and about a month before the regular telecasting of instruction was to begin. From that time on, a research staff headed by one of the authors (George Comstock) was maintained through late January, 1966. The other author (Patricia Comstock) arrived in Colombia in May, 1964, and remained with the Colombia staff until the end of field study. The principal investigator (Maccoby) was in Colombia for about two weeks early in 1964, the three summer months of 1964, two weeks in December, 1964, and January, 1965, and two weeks in mid-summer of 1965.

During these two years, the first ETV Volunteers completed their standard overseas service (about 21 months, preceded by about three months' training), and the large contingent of Volunteers who replaced them finished somewhat more than the first third of their service. While we were in Colombia hardly a day passed that we did not talk to some Volunteer about his work. We attended their meetings, business luncheons, and conferences. In addition, the nature of our research often involved us with them since they were the best and most reliable contacts with the Colombian schools using the television.

As a result, even when we are examining the data from questionnaires and similar instruments, we do so with the knowledge gained from considerable personal experience. However, we will also make use of our experience by offering some more subjective interpretations on topics not amenable in our situation to quantification.

Organization of the Report

In Part I, we outline the history and discuss the experiences of the Volunteers in the ETV Project, followed by an examination of the characteristics peculiar to a Peace Corps undertaking like the ETV Project, the special problems for Volunteers to which these characteristics give rise, and what the Peace Corps might do about them. Because we deal with characteristics of the ETV Project likely also to be found in other Peace Corps projects, our comments have fairly broad application.

In Part II, we analyze the results of a questionnaire designed to cover a broad range of topics pertinent to Volunteer service that was completed by the Volunteers very early in service and again upon termination. It is in this section that we look at changes in opinions, attitudes, and views during service, and at the Volunteers' evaluations of their project, the Peace Corps, Peace Corps training, and how they personally benefited and gained from their service. In Part III, we study the changes in meaning to the Volunteers over the first and last three months of service of 16 Colombia-, Peace Corps-, and self-related concepts. The data were obtained with a 21-scale version of Osgood's semantic differential from replacement and original Volunteers at the beginning and end of three months of overlapping service. The results are revealing about the relative tendency and focus of changing perspectives during the first and last months of service, and have some larger implications, especially for Peace Corps training.

Part I: An Overview of the Volunteer Experience

We will begin with a broad and occasionally subjective treatment of the experience of the more than 140 Volunteers who served in the ETV Project during our two years in Colombia. First, we will describe briefly the composition and Peace Corps history of these Volunteers. Second, we will try to relate certain circumstances they encountered to Volunteer effectiveness in an attempt to derive some generally applicable procedures the Peace Corps might adopt in certain situations to improve Volunteer performance and morale.

Our approach will be somewhat different that that of others who have written of their extensive observation of Volunteers overseas. We will not relate anecdotes of Volunteer problems in adjusting to a foreign culture, for we think that the published fund of such information would not be markedly enriched by any contribution we could make. Moreover, we have presented and analyzed a large collection of anecdotes on job problems, systematically collected, elsewhere. We will also not attempt to formulate a model of the stages of Volunteer adjustment and skill development overseas. We recognize the value of such work, for any uniformities among Volunteers in their overseas careers would have implications for planning and administration. However, we do not feel that our deep involvement in a rather special kind of project would justify such treatment at a time when the number of Volunteers who have completed service throughout the world is beginning to be numbered in the tens of thousands. Such work now should have a broader base than we can provide. Nor shall we try to differentiate Volunteer effectiveness or adjustment on the basis of personality characteristics --

such as "people-oriented" vs. "problem-oriented," for example -- because, again, we do not think that the ETV Project provided a broad enough range of Volunteer activities for any such inferences to have broad applicability, even assuming that they could be used in any meaningful way for recruitment or selection (it is easier to detect the desirability of a trait in the field than to measure it accurately enough so that individuals can be treated differently on the basis of degree of possession). In this sphere, we will confine ourselves to singling out readily identifiable skills, knowledge, and interests pertinent for Volunteers in an educational project such as ETV in Colombia.

What we will focus on will be the meaning for the Peace Corps of a large, special purpose project in regard to Volunteer effectiveness. On this issue, we think the ETV Project provides an especially valuable example from which broadly applicable guidelines can be adduced.

The Volunteers in ETV

This brief sketch of the history of the Volunteers who served in ETV during our two years in Colombia will give those unfamiliar with the project a framework into which to fit our subsequent comments and the studies which follow in later sections. There were two large contingents. For convenience, we have chosen to term the 82 Volunteers who inaugurated the project at the beginning of 1964 the "original" ETV Volunteers, and the 55 who replaced them in mid-1965 as the "replacement" ETV Volunteers.[1]

The history of these two contingents is outlined succinctly in Table 9:1. This shows the number of Volunteers who entered and completed

Table 9:1 Summary of Volunteers Entering ETV Project Through End of 1965

"Original" ETV Volunteers (late 1963 and early 1964 through mid-1965)*

Training Group (and assignment)	Entered ETV in Colombia		Terminated from ETV before End of Two Year Tour of Duty Semester of Project Terminated:			Completed Tour of Duty in ETV	Extended Service
			First (ended June, 1964)	Second (ended Nov.,1964)	Third (or later)** (ended June, 1965)		
VIII (television production)		M	1	1			
		I	2				
	17	R	1		2	9	
		T	1				
D.R. (television programming and utilization)		M					
		I					
	14	R				10	2
		T	2		2		
XIII (utilization)		M		1	1		
		I		2	2		
	45	R	1	1			
		T	2	2	2	31	3
Technicians (5 from Group XIII; 1 from Group VIII)		M		2			
		I					
	6	R				3	
		T	1				
Total N =	82					53	5

*In addition to these Volunteers, five others entered early in 1965 after training with non-ETV Colombia contingents; all completed the remainder of their service in ETV, and one extended service.

**Semesters are the natural calendar unit for ETV service; the 21-month standard overseas tour encompasses slightly over three semesters.

M = resigned from Peace Corps giving desire to return to U.S. to marry as reason; I = resigned from Peace Corps because of illness; R = resigned from Peace Corps on miscellaneous grounds; T = transferred to non-ETV Peace Corps assignment.

Table 9:1 Summary of Volunteers Entering ETV Project Through End of 1965

"Replacement" ETV Volunteers (mid-1965 through 1966)*

Assignment (trained) together	Entered ETV in Colombia		Terminated from ETV before End of Two Years Tour of Duty Semester of Project Terminated: Fourth (ended Nov., 1965)	Fifth (ended June, 1966)	Sixth (ended Nov., 1966)	Completed Tour of Duty in ETV	Extended Service
Production	12	M		1		10	2
		I					
		R					
		T		1			
Utilization	38	M	2			32	5
		I			1		
		R		1			
		T		2			
Technicians	5	M				5	1
		I					
		R					
		T					
Total N =	55					47	8

*In addition to these Volunteers, five others entered early in 1965 after training with non-ETV Colombia contingents; all completed the remainder of their service in ETV, and one extended service.

M= resigned from Peace Corps giving desire to return to U.S.to marry as reaon; I = resigned from Peace Corps because of illness; R = Resigned from Peace Corps on miscellaneous grounds; T = transferred to non-ETV Peace Corps assignment.

service in ETV, and attrition from the project by resignation for marriage, illness, and other reasons (the miscellany called "personal adjustment") or transfer to another kind of activity. Attrition is shown by semester, the natural unit of operation in the ETV Project.

As the table indicates, the original ETV Volunteers consisted of three separately trained groups: "Colombia VIII" (numerical designation was used by the Peace Corps at the time to indicate sequence of entry for a country); "D.R.," so called because trained for the Dominican Republic and reassigned to Colombia before departure; and "Colombia XIII." "Colombia VIII" was assigned to television production in the Bogota studios except for one technician; "Colombia XIII" was assigned to "utilization" -- working in schools on the effective use of television at the point of reception -- except for a few technicians; "D.R." varied and changed in assignment, the majority transferring to utilization after a semester of assisting in production. The technicians, of course, were to service studio equipment and install and maintain TV sets in schools.

The implied division of labor has been the same throughout the project: a very large utilization component (at the beginning, 45 "Colombia XIII" Volunteers) and a fair-sized studio component (at the beginning, 17 "Colombia VIII" plus 14 "D.R." Volunteers), with a small number of technicians (at the beginning, six). The replacement Volunteers of 1965 were fitted into the same structure (38 in utilization and 12 in the studio, with five technicians). However, there was an important difference in their preparation: they trained together for ETV in Colombia although training content varied with intended assignment.

In addition to these large original and replacement contingents, there were five Volunteers trained with non-ETV Colombia groups who entered the project early in 1965, two into the studio and three into utilization; there was no attrition among this group.

There is little point in a demographic resume rococco with statistical detail. All the Volunteers were in their mid- or low twenties except for a television director in his late 30's among the original contingent, who resigned, and a school principal in her 60's among the replacement contingent, who served with distinction. Among the original Volunteers at entry into the project, there were 40 males and 42 females, including six married couples. Among the replacement Volunteers, there were 33 males and 22 females, including one married couple. There were several marriages of the Volunteers while in Colombia: among the original Volunteers, there were four marriages of ETV couples, one between a male ETV Volunteer and a female Volunteer in another project, one between a male ETV Volunteer and a college acquaintance who had taken a job in Colombia, and one between a female ETV Volunteer and a Colombian; among the replacement Volunteers, there were two marriages of ETV couples. Except in one instance, all of these newly married Volunteers completed their full term of service.

The backgrounds and interests of the Volunteers varied in accord with assignment. Studio Volunteers generally had some training and experience in television or radio, either by college major, work, or both. The same could be said of the technicians, only with greater emphasis on engineering than production. As groups, the original and replacement utilization components differed in an important respect.

The original utilization Volunteers presumably had an interest in educational television, but almost none among them had any background in education or teaching. The replacement utilization Volunteers included many more teachers, and the focus of interest was in education -- for which television seemed a useful tool. Taken as groups, the original utilization Volunteers were attracted by the media, their replacements by education; the original Volunteers were weak in educational experience, their replacements relatively rich. As we indicate elsewhere, in this report and others, the replacement Volunteers proved to be better suited to this particular project.

The experiences of the Volunteers varied markedly, depending on their assignment in the project. The typical studio Volunteer lived throughout his service in Bogota, and worked primarily with other studio personnel in the production of televised material; most were producer-directors working in close partnership with a Colombian television teacher on one to three televised courses for elementary pupils, with each course consisting of two 15-minute telecasts a week over a semester; others had special assignments, such as making films for use in the televised courses, or responsibilities for coordinating studio activities.

The typical utilization Volunteer lived in three or more places during his service, spending about a semester introducing television into the schools in an area; sites ranged in size and urbanness from Bogota, with 1.7 million people, to villages of a few hundred, and in location over the populated areas of the country; most travelled daily from television school to television school attempting to develop in each regular, effective use of the medium, working with teachers, directors (principals), and higher local officials; a few had the responsibilities for coordinating the utilization activity within a region and representing the project at the Department (state) level.

When assigned to production, the "D.R." Volunteers worked with specially designated Colombian teachers preparing scripts and the TV Teacher Guides for classroom teachers, functions transferred to the television teacher after the first semester to unify responsibility and improve instruction by making him a teacher instead of an actor; when transferred to utilization, their work was the same as for other utilization Volunteers. In addition, as there would be in any large, complex project, there were some specialized activities that occupied various Volunteers at various times -- the production of television for in-service instruction of elementary teachers and adult health and literacy instruction, the conducting of classes for teachers and adults in conjunction with this television, the conducting of other workshops and training sessions for teachers, the training of Colombians to serve in the studio, utilization, or as technicians, and the like.

The typical technician Volunteer changed residence frequently like the utilization Volunteer; his work consisted of servicing television in the schools in the growing receiving network (about 1,250 schools by the end of 1966, a more than six-fold increase from the 200 with which the project began in 1964); one or two were concerned primarily with studio equipment in Bogota.

As can be seen from Table 9:1, attrition from the ETV Project was relatively high among the original Volunteers. Of the 82 who entered

ETV, only 53 remained in ETV at the end of the regular service (two years, with 21 months overseas), an attrition rate of 35 per cent. Of the 55 replacement Volunteers, 47 remained in ETV at the end of regular service, an attrition rate of only 15 per cent. If the five who entered in early 1965 are classified with the replacement Volunteers of mid-year, the attrition would drop further to 13 per cent.

This disparity between attrition from the project for the original and replacement Volunteers demands comment. We should first emphasize that these figures reflect attrition from the ETV Project for any reason, and not necessarily from Peace Corps service. We have used these gross rates because we think they meaningfully reflect changing conditions in the project.

Other rate comparisons have identical implications. No matter how attrition is measured, a greater proportion of the original Volunteers found it desirable to leave the project. However, because attrition is one measure of appropriate Volunteer assignment and successful project operation we will discuss the situation in some detail.

Attrition by reason is shown in the table. Of the 82 original Volunteers, six resigned to return to the U.S. to marry (seven per cent), six resigned because of illness (seven per cent), five resigned on miscellaneous grounds (six per cent), and 12 transferred to a Peace Corps activity outside of ETV (15 per cent). Of the 55 replacement Volunteers, three resigned to return to the U.S. to marry (five per cent), one resigned because of illness, one resigned on miscellanious grounds, and three transferred to a Peace Corps activity outside of ETV (five per cent).

It is difficult to decide which of these reasons to combine to derive an index of attrition representing Volunteer dissatisfaction with a project. It is certainly arguable that illness should be excluded as it is beyond the control of the Volunteer; it is also true that dissatisfaction with being a Volunteer is likely to influence the interpretation of an illness as incapacitating by doctor and patient. Marriage is certainly a personal matter, yet it seems unlikely that resigning to return to the U.S. to marry after completing training and beginning service overseas would be unrelated to a Volunteer's feelings about his service. The catch-all of miscellaneous grounds undoubtedly includes personal maladjustment as well as dissatisfaction with service.

Since we saw little reason why marriage in the U.S., illness, or miscellaneous factors should be more prevalent among the original than the replacement Volunteers, we lumped all of these with transfer to another Peace Corps activity for a gross rate. Transfer out of ETV while remaining in the Peace Corps provides a relatively pure measure of project dissatisfaction; here, the rate for the original Volunteers was 15 per cent, and for the replacement Volunteers five per cent. Excluding all three kinds of resignation does not affect the pattern. Neither does excluding one or two; with illness excluded (the most justifiable candidate), it is 28 vs. 13 per cent; with illness and marriage excluded, it is 21 vs. seven per cent; with illness and miscellaneous grounds excluded, it is 22 vs. 11 per cent. Whether a gross or more refined rate is used, attrition was higher among the original Volunteers.

We attribute this to differences in the project itself at the two points in time. However, we recognize that in any individual case a number of quite personal factors undoubtedly also were involved. We must also caution that it is not a single characteristic which differentiates the project at the two points in time, but such an array of differences that it is accurate to say that it actually differed in character.

The difference can probably be best summed by saying that the replacement Volunteers entered an on-going organization, while the original Volunteers did not. The replacement Volunteers received all the benefits implied in joining an existing organization: they were placed in positions with reasonably well-defined duties and responsibilities -- in more technical terminology, they assumed well-established roles; their working arrangements with Colombians and other Volunteers had been laid out -- there were "standard operating procedures"; they were held to relatively realistic criteria based on the past experience of Volunteers in the same jobs, so that they could readily achieve satisfaction in their jobs; the project's goals had been more clearly defined and had achieved some degree of translation into reality; there was firmly established direction at Peace Corps staff level from a specialist in educational television with an avowed interest in educational methodology; within a few days of arriving in Colombia it was possible to place them in full time, meaningful, permanent assignments; they were recruited, trained, and selected with knowledge of the project's actual experience in Colombia rather than on the basis of a prospectus (this particularly benefited the utilization component, which as a whole had a greater pre-Peace Corps background in education, more general interest in education, and superior Peace Corps instruction on teaching methods); the utilization component, the largest group, overlapped about three months with the Volunteers they were replacing, and as a result they received guidance from experienced Volunteers; and there were established Volunteer leader roles defined by function (production, utilization, and technical support) and, within utilization, area, which helped to integrate the Volunteers into the project in addition to increasing operational effectiveness directly. All of these were improvements which our research had clearly indicated were desirable for increased project effectiveness.

For the original Volunteers, the situation was dramatically different. There was an exasperatingly long wait before they began work (the production group, "Colombia VIII," arrived about three months before the utilization Volunteers in order to begin the taping of programs far in advance of telecasting, but for various reasons -- the readying of equipment and negotiations to share facilities with Colombian national television that were in commercial use -- could not begin regular work in the studios for more than two months; "Colombia XIII," the utilization Volunteers, arrived during the long end of the year school holidays which stretch through the end of January, and could make little contact with teachers or officials for several weeks.

Roles were undefined; in particular, many of the utilization Volunteers found they had neither the interest nor the skills for educational consulting, and even those not so hampered found that solving the organizational and physical problems in the schools that interfered with regular and good viewing took much of their time and energy.

The unfortunate acceptance by the utilization Volunteers of markedly changing teaching methods as the major criterion of effectiveness deprived them of job satisfaction, since they found this beyond their resources.

The production Volunteers found their task extremely frustrating since program content was not always well defined, equipment often broke down, and, perhaps most important, there were no ground rules for the sharing of studio space and equipment with the Colombian commercial users and no established working procedures with Colombian studio personnel. Volunteers with previous television experience estimated that during these early months production took half again as much time as it would under normal conditions, a disparity that was gradually reduced as the project developed.

The original staff level Peace Corps director of the project resigned for reasons of health early in the first year, leaving the project without a specialist director for about a year. Although by necessity Volunteer leaders assumed responsibility in production and technical support, there were no leaders designated among the utilization Volunteers until after about six months in Colombia (ostensibly the time required for the desired traits to become sufficiently evident). Under these conditions there was, of course, little guidance for the Volunteers in their roles; there were no project-experienced Volunteers, and staff level direction in the interim between specialist directors, although competent within its bounds, was largely limited to maintaining the operation in whatever form it might be taking rather than shaping it for greater effectiveness.

Despite these difficulties, these original ETV Volunteers accomplished a great deal -- during 1964, the project's first year, an average of 330 minutes a week of new television was broadcast each semester, and the receiving network more than doubled, from about 200 schools with 1,000 teachers and 38,000 pupils at inauguration to about 500 schools with 2,500 teachers and 97,000 pupils by year's end.[2] However, it should hardly be surprising that there was a great deal of frustration and dissatisfaction with the project among the Volunteers. In our opinion, these took their toll in the very observable form of attrition from the project.

In concluding our sketch of the ETV experience of these original and replacement Volunteers we should add that among both groups there were several extensions at termination beyond the normal term of service. Among the original Volunteers, there were five extensions (about six per cent of the total initially entering, about nine per cent of the total remaining at the end of the standard service term). Among the replacement Volunteers, eight extended (about 15 per cent of the total entering, about 17 per cent of the total remaining at regular termination). As might be expected, extension was inverse to attrition (that is, extensions were relatively fewer among the group for which attrition was greatest).

We should also add that we recognize that difficulties pertaining to Volunteer morale and effectiveness can be easily dismissed as part of the penalty of innovation and "pioneering." However, we think it is far more profitable to try to interpret Volunteer behavior as a function of project characteristics, such as degree of organization, for such variables can be assumed to be within the control of the Peace Corps.

In this instance, the implication is that the more a new project can emulate the characteristics of an established operation the less will be Volunteer frustration and attrition. We develop this approach further in the next section in which, using the ETV Project as an example, we discuss the special problems of the large, integrated Peace Corps project and what the Peace Corps might do about them.

Project Characteristics and Volunteer Performance

We believe that the experiences of these ETV Volunteers can be interpreted profitably and meaningfully only by taking account of the characteristics and circumstances of the project in which they served. We certainly do not believe that any particular set of Volunteers -- serving, as they do, in a particular place at a particular time in particular and often highly individualized undertakings -- can be taken, for purposes of broad inference, as typifying the Peace Corps Volunteer. However, precisely because circumstances have such a strong influence on Volunteer behavior there is much to be learned from an examination of Volunteer behavior whenever circumstances involve factors likely to be found in other Peace Corps projects. The usefulness of such an approach, of course, depends on how well the characteristics of a particular project are defined. They must not be so broad as to seem to occur in any specially organized human undertaking, nor so narrow as to appear unique. We believe that we can identify a number of conditions in the ETV Project that affected Volunteer behavior which are certainly likely to occur again in any large-scale instructional television project, and are also likely to be common to many other kinds of project.

We will begin by setting forth some of the characteristics of the ETV Project which seem to us to have been most crucial for Volunteer adjustment and performance. We will then examine some of the special problems to which these gave rise. Finally, we will suggest some things the Peace Corps can do when a project has such characteristics to mitigate these problems and maximize the project's effectiveness.

Project Characteristics: Some of the features which distinguish the ETV Project are these:

a) Highly centralized organization encompassing a large number of Volunteers in a single undertaking. The ETV Project was structured for a large number of Volunteers -- in the three years since the project's inauguration at the beginning of 1964 and the end of 1966, between about 65 and 90 Volunteers at any one time -- to serve under the leadership of a single staff level project director. This Peace Corps project director is not responsible for Volunteers in any activities outside of ETV. Because of the specialized purpose of the project, its size, and the need to coordinate activities, Peace Corps "staff support," provided by the project director, involves not merely guidance and personnel management, but leadership. In contrast to many Peace Corps activities in which the Volunteer is very much on his own, decisions and policies affecting the Volunteer's job flow from the top downward in the ETV Project. Volunteer leaders responsible for specified activities or, at the school level, delimited areas function as the project director's deputies. A charting of the project's organization would result in a pyramid and lines of authority and responsibility, not the unstructured horizontal array of Volunteers acting independently often found in the Peace Corps.

b) Staff level direction by a substantive specialist. Because of the specialized nature of the project, the role of the project director demands someone knowledgeable and experienced in television production and education -- especially the production of television for instruction and, because of the nature of the Colombia project, primary education. This contrasts with the task-independent demand of most staff roles for which interest, knowledge and experience in the country or culture are emphasized.

c) Interdependence of groups of Volunteers performing markedly different jobs -- in more formal terms, the integration in a common effort of Volunteers in functionally distinct roles. There have been two principal Volunteer components in the ETV Project, each involved in a very different kind of activity. One consists of the studio Volunteer responsible for the design and production of the televised instruction, and the other of the utilization Volunteers concerned with making the televised instruction effective and viable in the schools comprising the receiving network. In addition, there is the small number of Volunteers serving as technicians, who install and service the TV sets installed in schools. All three of these components -- studio, utilization, and technical -- are necessary to the project's operation, yet none alone is sufficient to make instructional television a reality in Colombia's schools.

Moreover, the effectiveness of Volunteers in any one of these activities is tied to what can be accomplished in the other two. The technician at best can provide a potentially useful receiver; the studio person creates for no purpose if schools can't receive or don't adapt well to using television; the utilization Volunteer bases his work on working receivers and the character and quality of the television. The technicians, because their job is so clear-cut, have been able to do it with little friction with the other components. The studio and utilization Volunteers have been linked in a far from easy relationship, for the latter's success in working with his teachers is affected by whatever does or does not appear on the screen. For the utilization Volunteer, the effects of weeks of work can be diluted by disruptions in telecasting, whether caused by error or technical breakdown, or through programming inspiring excessive criticism from classroom teachers. In turn, although the impact on him is less direct, the studio Volunteer's potency as a provider of instruction depends on what takes place in the schools.

d) Geographical dispersion and relative isolation of Volunteers engaged in the same integrated project. Since the inauguration of the project in 1964, the studio Volunteers have been stationed in Bogota, the headquarters for the entire project, where the production facilities are. The utilization Volunteers, however, for the most part have been stationed far from Bogota. Up to the end of the project's first semester, in mid-1964, about half were in Bogota and the rest in the smaller cities and villages in the surrounding Department of Cundinamarca, some as many as five hours by car from the capital. After that, the majority were spread out far from Bogota in expanding the project's receiving network of schools. By the end of 1966, many were several hours by plane from Bogota. In addition to this geographical separation of studio and utilization Volunteers, the utilization Volunteers have been alone or in small groups far apart from each other.

e) Dependence on cooperation and support from host country agencies. The ETV Project, as a joint Colombia-Peace Corps undertaking and because of its scale and nature, has been dependent for success on the actions of various agencies of the Colombian government -- the Ministries of Communication and Education, the semi-official *Instituto de Radio y Television*, and the Departmental (state) governments. Planning has been contingent on coordination, and operations on the supplying of funds, facilities, and counterpart personnel. Usually this cooperation and support has involved negotiations between the staff level Peace Corps ETV project director and Colombian officials. The results have affected the work of all the individual Volunteers in the project. The consequence has been that much concerning the activities of the Volunteers has been beyond their influence.

f) A goal of building a large, multi-faceted host country organization to supplant that of the Peace Corps. The eventual, professed goal of the Peace Corps in the ETV Project is to establish a system of instructional television operated independently by Colombia without major outside assistance. This demands the building of new institutions whose people will fulfill the functions so far taken care of by the Peace Corps. Presumably, the effort to build host country capability and independence is one engaged in by most Volunteers everywhere. However, this task in ETV in Colombia is set apart by its scale. It is immense and complex. It does not involve merely increasing the skills or expanding the responsibilities of a few people or of gaining support for a few new posts. Nor is it limited to any activity, level of operation, or the sphere of any individual or group of Volunteers in ETV. For the Peace Corps to succeed in ETV in Colombia in this ultimate respect, there must eventually be a new educational structure encompassing figures in the Ministries of Education and Communication, the studios of the Instituto de Radio y Television, and the Departmental and local school systems. Otherwise, even the most brilliant of operational achievements will have no lasting effects. Like so many other aspects of the ETV Project, this goal of independent Colombian operation means that much affecting the impact of the work of an individual Volunteer is largely out of his hands.

g) Consulting, not teaching, in the schools. Although concerned with the educational impact of the television in the classroom, the utilization Volunteers do no teaching beyond the occasional demonstrating of techniques to teachers. Instead, they advise and proslytize. Moreover, they often must create among the teachers in a school a market for their wares. They are emissaries for instructional television and often consultants without invitation -- a role without the ready definition and criteria of teaching.

h) Continuity beyond a single Volunteer term of service of a complex organization. Of course, most Peace Corps programs continue beyond the term of service of a single group of Volunteers. However, most Peace Corps programs also involve placing Volunteers in situations where they function relatively independently. In these cases, programs continue primarily in the sense that human resources continue to be devoted to the same kind of activity in a country; continuity is a matter of maintaining focus. Continuity for the ETV Project has meant something quite different. Because the project's special purpose necessitates a centralized, well-structured organization integrating Volunteers performing a variety of different tasks, continuity has meant that successive groups of Volunteers have been fitted into previously established positions; continuity, for ETV, has been a matter of maintaining an existing organization.

i) Newness of the type of undertaking. The Colombia project was the Peace Corps' first venture into instructional television. In addition, compared to other parts of the world, the Peace Corps had little experience with schools and education in Latin America; in 1965, the Peace Corps reported that so far only 17 per cent of Volunteers in Latin America had been in education projects of all kinds, compared with 76 per cent elsewhere.[3]

Special Problems: We believe that these characteristics led to some rather special problems affecting Volunteer performance. Of course, since we are dealing with a complex real life situation and not circumstances specially concocted to study behavior, there are no simple one-to-one relationships between characteristics and problems. Nevertheless, we suspect that wherever these characteristics exist the same problems also are likely to arise. As a result, we think it worthwhile to discuss these relationships even though the inevitable complexities of real events make it possible to do so only in a general way.

The problems included:

a) Lack of coordinated, cooperative effort between Volunteers performing different functions. When people work far apart from each other and have markedly different jobs, it is not unusual, even when they are part of the same organization, for them to develop different perspectives. This happened with the studio and utilization Volunteers. Within these components, there tended to be relatively high communication; between, very little. Yet, as might be expected under such circumstances when there is also unavoidable interdependence for full job success, the two groups also felt considerable hostility toward each other. As one utilization Volunteer said, "I don't know what it is about those studio people, but I can't get along with them. And I don't think they care about what we are doing." And as a studio Volunteer said, "Those people out in the schools just don't seem to understand our problems. I know the television isn't perfect. It isn't always like we'd like it, either. But we do everything we can."

For the original ETV Volunteers, whose service was completed within the span of our field study in Colombia, this division was encouraged by the separate training by the Peace Corps of the two components. In Colombia, it was augmented by the concentration of the studio Volunteers at the Bogota ETV headquarters where the production facilities were while the utilization Volunteers were spread throughout the country. It was augmented by the very different nature of the two groups' visible achievements.

The studio Volunteers, as producers of a product, came to assess their work largely in terms of the values of their craft -- television. Esthetic often took precedence over educational values. Since they often worked under very real and trying difficulties, the filling of the required minutes of air time became equated with success. The utilization Volunteers, working in the schools, thought of the television as a means, not an end. They found satisfaction only in television's successful use for education. They were concerned with the behavior of people in regard to the television, and this behavior became their criterion. Since achieving successful utilization of television in the schools did not come easily, they reacted to any disruptions or deficiencies in the television as unnecessary burdens. In turn, the studio Volunteers, because there was so little communication between the groups, largely lacked sensitivity to the way their products fitted into the schools and educating. The consequences of these various factors was lowered Volunteer effectiveness. Certainly morale was adversely affected. In addition, the two Volunteer components -- studio and utilization -- needed the support and information each could provide the other.

b) Inappropriate recruitment and training. When a project is new in type, there is always some danger that the recruitment and training of personnel will not reflect actual needs. This is especially true when a project involves a special technology, such as television, which seems obvious as a basis for planning and organization. Certainly, television seemed to be the obvious core of the ETV Project in Colombia. Yet, it turned out not to serve well as the guiding principle for recruiting and training utilization Volunteers.

It turned out to be a mistake to emphasize television -- even instructional television -- in the recruitment and training of the original complement of utilization Volunteers. The emphasis should have been on education and teaching. These Volunteers spent all their time in the schools and with school people. On the basis of interest alone, an attraction to television did not prove the equal of an interest in education for people whose daily round took them from school to school, classroom to classroom. As we have said elsewhere, the ideal utilization Volunteer should have experience and training in education prior to Peace Corps service. This is important partly for the lasting interest in education it implies, partly for the substantive knowledge he would possess, and partly for the confidence it would give him in imparting advice to teachers. If without such a background, the prospective Volunteer must receive such training from the Peace Corps. However, because the utilization Volunteer works at the school level, only competence and involvement in education can insure that he will serve well and effectively throughtout his term of Volunteer service.

We concluded that many of the Volunteers who left the original utilization component before the end of their service -- either by resigning or by transferring to another activity, in or out of ETV -- and some who remained in utilization were not as effective as they might have been simply because they were chosen and trained wrongly for their jobs. In regard to training, we found in interviewing the original group of utilization Volunteers near the end of their first semester of service in 1964 that many felt frustrated because they lacked sufficient knowledge of educational methodology to help their teachers. As one Volunteer, who later resigned, said, "I'm supposed to help teachers, but I don't know a thing about teaching. I've never seen an education journal in my life." This lack of appropriate background and training led to a great waste of human resources, low morale, and feelings of frustration while the first utilization Volunteers were coming to terms with their jobs.

In this context, it is illuminating to examine the evaluation of their training made by the original utilization Volunteers at the beginning and again at the end of their overseas service. The mean rating of the overall adequacy of training on a seven-point scale (the higher the score, the more favorable) by the same group of utilization Volunteers shifted downward dramatically from 5.48 at the beginning to 3.67 at the end, a highly statistically significant decrease ($p. < .001$, two-tailed; $N = 21$). In a follow-up open-ended question in the same questionnaire, a majority (about four out of five) specified "educational methodology" as being the major omission or deficiency in their training at the end of service, while few had done so at the beginning (about one out of 10); moreover, this was the sole aspect of training to receive such near-universal criticism at the end of service.

We should add that the Volunteers who succeeded the original group in utilization were, on the whole, more appropriately recruited and trained. There were more former teachers among them, and more emphasis on education in the training. We think this changed approach has had definite dividends in increased Volunteer effectiveness.

c) Inaccurately defined and specified roles. As with recruitment and training, when a project is new roles may be inaccurately defined and specified. In the case of the original utilization Volunteers, this lead to a lack of reinforcement and job satisfaction -- factors seldom associated with high effectiveness. When they began their assignments, the utilization Volunteers thought they would be primarily conveying advice and encouragement to teachers about using television in their classrooms, and that the Colombian teachers would be an eager and responsive clientele. Neither proved to be the case. Adapting schools -- in facilities and organization -- to the use of television proved to be a prerequisite for effective advising on teaching. Teachers proved ready to accept a television set, but less ready to change their practices. In addition, many of the Volunteers, as indicated above, found themselves inadequately prepared to significantly affect teaching.

Unfortunately, the concern with adapting schools to television, or "school development" as we have called it elsewhere, did not fit their initial conception of their role as educational consultants. Since by the inappropriate criteria they understandably applied to themselves they were achieving little, many suffered real and deep feelings of failure. Along with inappropriate recruitment and training, this figured in the attrition from the utilization group. It took almost a year for the utilization Volunteers to become comfortable in their role -- which, as we have pointed out elsewhere, ironically was a crucial one for the project. What happened over this time was that they came to accept "school development" as legitimate performance criteria. Once they had done this, they were able to find considerable job satisfaction.

d) Defection. When a large, centralized, multi-faceted project has people spread out geographically, it is not uncommon for those with little contact with others in the same project to feel isolated and outside the mainstream of activity. Unfortunately, one solution for an individual is to largely desert his role in the larger project for more localized activities for which he is the center. In a few extreme instances among the original utilization group, Volunteers alone in small communities became so engrossed in local undertakings outside of ETV that they practically ceased to be part of the project except in name. A Peace Corps evaluation officer, visiting the project in mid-1964, aptly called such Volunteers "defectors to community development." One such

Volunteer remained in the same village for his entire 21 months in Colombia, introducing television only to the few schools in his vicinity, while other ETV Volunteers changed communities every semester to reach more schools. We have no criticism of the work outside of ETV such defectors may have accomplished. However, in terms of the ETV Project, the cost of such defections runs high -- measurable in dozens of schools, hundreds of teachers, and thousands of pupils at least temporarily excluded from the receiving network.

e) Doubt over achievement. When the eventual fate of a project depends on support from the outside over which there is no direct control -- in this case, from Colombian officials and agencies -- and when negotiations and decisions affecting such support are made above the Volunteer level, Volunteers understandably may sometimes come to doubt the usefulness, meaning, and importance of their efforts. This is because the long-term impact of their work does not depend on what they do, but on what others do. This is quite different from the more common Volunteer's concern over whether he has been able to affect significantly the people he has worked with directly. There was quite a bit of such doubt, cynicism, and consequent low morale among the original ETV Volunteers.

Of a variety of common problems likely to affect Volunteer effectiveness, the most frequently named as "very serious" by these Volunteers both at the beginning and end of their service was "support from Colombian officials," which lay outside their control. This kind of doubt was common to Volunteers in all phases of the project. There were frequent, unfounded rumors about the dissolution of the project. This aura of doubt was augmented by uncertainty over the intended length of Peace Corps commitment (although now Peace Corps participation in ETV in much the same form as at the beginning is projected through the end of 1968, the original timetable covered only the term of service of the original Volunteers) and the lack for a long period of a specially qualified project director (the original director resigned for reasons of health early in 1964 and was not replaced until early in 1965; in the interim, ETV was an addendum to the responsibilities of other Colombia Peace Corps staff). Another contributor, related to dependence on support from outside the Peace Corps, is the important goal of building institutions for independent Colombian operation of ETV. Developments in this area are naturally highly visible, for they involve the commitment of people, facilities, and money. When they were slow or set back -- as when the Colombian government failed to provide 50 promised counterparts to the utilization Volunteers and construction of special studios for ETV lagged two years behind schedule -- there was considerable disillusionment among Volunteers. These kind of factors had their impact because of the highly structured organization and special purpose of the ETV Project. As part of a large scale undertaking, the work of the individual Volunteers takes its ultimate meaning from the project's development.

What Can Be Done: When an undertaking has the characteristics of the ETV Project, there are a number of things which can be done to reduce the effects of the special problems which arise. Some are probably now obvious; some, perhaps less so. Included are:

a) Advance detailed specifications of Volunteer roles. If a Volunteer has a clear and accurate idea of what his job is, he can adopt realistic criteria to better evaluate and improve his performance. The result is increased effectiveness and higher morale. We were very impressed in the ETV Project with the early performance which we observed on the part of the utilization Volunteers who replaced the original contingent. Unlike their predecessors, these Volunteers assumed a well and accurately defined role. In addition, as a whole they were far better fitted for this role for many had teaching backgrounds.

We believe the original idea of assigning Volunteers to work in the schools with teachers and officials on the use of the television was an excellent one. On the basis of observation and research, we have concluded that the utilization Volunteers have been crucial for the project's successful operation. However, it is also apparent that in the initial planning not enough attention was given to asking just what they would actually do. In practice, there was not much more than the establishing of a channel of communication between the Peace Corps ETV Project, represented by Volunteers given some familiarity with instructional television in their Peace Corps training, and the schools; scant attention was given to the content of the communication that might ensue. As a consequence, recruitment and training did not fit the vague role of teaching consultant initially advanced, and this role failed to encompass the full spectrum of duties which had to be assumed. At this time it is neither profitable nor possible to lay out all the causes for this early fumbling. Certainly the cachet of television helped direct attention from what would actually have to be done in the schools; lack of experience, either with instructional television or Latin schools, also contributed. We suspect, too, that the Peace Corps' emphasis in Latin

America on community development, where Volunteers function independently of a special project, provided too tempting a model. Just because some Volunteer roles preclude detailed advance planning does not mean that all do, nor that the planning that is good for one is good for all.

When Volunteers will work as part of a larger project, it is important that their basic role be thoroughly explicated in advance. It is important for recruitment and training, and for performance and job satisfaction. This is because, when large numbers are expected to do the same kind of job in a centralized organization, the cost of inappropriate recruitment and training is high, and the latitude for individualization of every assignment by the Volunteer -- in the community development sense -- is low. On the basis of what we observed of the replacement Volunteers in 1965, we believe that the lack of advance specification and resultant structuring in the field of the utilization Volunteer's role reduced the effectiveness of the original contingent considerably during their first few months in Colombia. To avoid misunderstanding, we should probably add that we speak of the essential elements of this Volunteer role, and not every facet of his activity; there was plenty of latitude for initiative, originality, and individual approaches in the utilization assignment.

b) Joint training of Volunteers expected to coordinate activities, even if they will have very different kinds of jobs. When people have different kinds of jobs and work apart from each other, there inevitably will be some differences in perspective and values. The kind of division that arose between the studio and the utilization Volunteers is somewhat unavoidable. However, we believe that it was exaggerated among the original ETV Volunteers by the separate training of these two components. The replacement studio and utilization Volunteers of 1965 trained together. We think this led to a greater sharing of values, interchange of problems, and cooperation. Because we believe that the training experience is a powerful factor in establishing attitudes and views that are likely to persist throughout Peace Corps service, we think it is a tool that should be used in the interests of project cohesiveness whenever possible.

c) Strong project-oriented leadership. When a large number of Volunteers are expected to coordinate their work as part of a large scale special purpose project, they need strong, unusually knowledgeable direction from Peace Corps staff. This is especially true when support and cooperation from the host country must originate at fairly high levels where only a staff person can function effectively. Merely partialling out responsibilities to whatever staff is at hand is not an adequate substitute. Such a procedure can keep Volunteers functioning and present the facade of success, but it cannot provide the cohesiveness, direction, and guidance of a project director without competing obligations and with expertise in the field -- in this case, instructional television. We were extremely impressed with the impact on the project's development and progress when a director of this kind took charge in early 1965, after a year of provisionary Peace Corps staff administration. If there are to be large, specialized projects, there must be commeasurate staff leadership.

d) Systematic, prompt dissemination of project information. Information, when perceived as accurate and comprehensive, is an antidote to rumor and uncertainty. When an organization is centralized and decisions affecting everyone are made at the top, and when its people work apart from each other at different kinds of jobs yet are interdependent, there is both a need for information and a danger that it will not reach everyone. The "grapevine" distorts and is inadequate; essential communications, bearing only on the recipients' immediate job, do not range widely enough. There must be systematic effort to communicate developments to everyone equally in every sphere -- by newsletter, meetings, and the organization's official structure staffed by Volunteer leaders.

e) Appointment of Volunteer leaders for areas and specialized functions as soon as possible. Although a specialist director is necessary for an undertaking like the ETV Project, he cannot personally supervise the work of 50 to 100 Volunteers. Like the director of any large, diverse, dispersed organization, he must delegate responsibility. We think that such delegation should take place as soon as possible after the Volunteers begin service overseas in such a project. This is not because of the importance of their contribution as supervisors, although this may be considerable. In fact, we are inclined to think that this is the least important of their functions. What is more important is their function as a communicatory link between the individual Volunteer and the project director and the rest of the project. They are the relayers of information both to and from the individual Volunteer. They provide the Volunteer with a direct and close tie to the project.

We think Volunteer leaders are called for, on the basis of function, whenever groups of Volunteers in the same project have different jobs, and on the basis of area whenever Volunteers in the same project are geographically dispersed. For example, we believe that such leaders, appointed on a regional basis, were important factors in preventing widespread defection from ETV to other activities among the utilization Volunteers. Most of the defection that did occur among the original utilization Volunteers began before such leaders were appointed after several months in Colombia. There was relatively little of this among the replacement Volunteers of 1965 who from the start worked under such Volunteer leaders -- either precessors whose terms overlapped or newly appointed Volunteers from their own group. Because what is important here is the tie achieved to the special project involved, we do not think that general purpose regional supervisors, whether Volunteer or staff level, can be considered a substitute.

Such Volunteer leaders became especially important when a task is organized regionally to fit host country circumstances, as utilization was organized around Departments (states) because they were the governmental unit responsible for school administration. In such cases, local organization with Volunteer leaders permits the more effective, orderly adaptation of procedures to local circumstances, and gives all Volunteers a more meaningful -- and with large projects, much needed -- voice in their work. We were very favorably impressed in the ETV Project with the skill displayed by Volunteer leaders -- called "coordinators" in the egalitarian parlance of the project -- in gaining host country cooperation at the regional level and with the flexibility between areas such organization made possible. In addition, we were also impressed with the contribution to communication of Volunteer leaders. Since the leaders acted both as disseminators and representatives for their Volunteers, they simplified coordination and information flow -- between studio and utilization Volunteers and among utilization Volunteers in different parts of the country. For a number of reasons, then, we are convinced, on the basis of our observations over two years of the ETV Project in Colombia, that when a project is large, differentiated in kinds of jobs, and geographically dispersed, Volunteer leaders as part of the project are important for its success.

f) Special Volunteer conferences. The conference calendar appropriate for Volunteers working independently is not likely to be adequate for Volunteers who are part of a large, coordinated operation like the ETV Project. This is because there is a much greater practical need for communication. The large number of Volunteers in identical assignments -- such as utilization -- suggests that there is much to be gained from interchange on tactics and procedures. The division of the project into components -- such as the studio and the utilization Volunteers -- demands coordination and consensus on goals and purpose. The involvement of so many in a single project increases the felt need for information on progress and development outside the individual Volunteer's sphere. These factors are in addition to those common to all Volunteers which call for conferences to disseminate general information (such as on health and Peace Corps policies) and to provide Volunteers with an opportunity to learn that others have had similar problems, worries, and frustrations in order to bolster morale through more accurate comparison with others.

A single in-service conference after a few months in a country, presumably critically timed to have the maximum benefit on morale, may serve these common purposes. For a project such as ETV, however, we think that more frequent Volunteer conferring can increase effectiveness. Of course, conferences have a certain cost since they draw Volunteers from their assignments. For this reason, we particularly advocate very frequent conferences for Volunteer leaders who can then disseminate information to other Volunteers. We have participated in such conferences in the ETV Project; we are convinced of their utility and impressed by their economy. This is one way by which the structured character of such a project can be employed to its advantage.

g) In-service training for Volunteers. The absence of uniqueness in Volunteer activity makes possible in-service training. This is one of the benefits of having a large number of Volunteers in similar assignments. We think this could increase effectiveness as well as improve morale. In the ETV Project, we think that the utilization Volunteers definitely would have benefited from exposure to experts in classroom teaching methodology after they had been on the job for awhile. We found that the country-wide site visits of the project director made a valuable contribution in this vein. This is one important reason why a specialist project director is necessary. However, we also feel that his capability in this particular area is limited by the time required to cover the country and by the administrative demands of his position. For this reason, we think that some additional provision for systematic in-service training would be desirable.

In this context, we should also mention that we think that books and special publications pertaining to their assignment could be distributed to Volunteers when there are enough -- as with the utilization Volunteers in ETV -- in the same activity and there is a need for specialized knowledge. In addition to the direct help they might provide, this kind of attention and concern for effectiveness would increase the Volunteers' sense of mission. The noble American bereft of resources is a romantic and appealing image, but we doubt whether it should be inculcated at the expense of effectiveness -- which is what not providing some in-service training when it is feasible amounts to.

h) Project-shaped policies. We think that policies regarding Volunteers should be dictated by the demands of the project in which they are engaged and not an image of the average Volunteer. During our two years in Colombia we saw examples of both. We believe that when policies are not fitted to projects the implied lack of respect for Volunteer competence and performance has a detrimental effect on morale, in addition to whatever more direct penalty for effectiveness may occur.

An example of successful policy adjustment while we were in Colombia was an increase in the living allowances for all Colombia Volunteers in cities to compensate for higher costs. As it happened, this was a particularly welcome and necessary relief for the ETV Volunteers -- for the studio Volunteers who by necessity had to live in Bogota where living costs are the highest in the country, and for the many utilization Volunteers in various large Colombian cities. For months before, we had observed these city Volunteers scraping by under conditions of very real deprivation compared to those outside urban areas. This was especially true of the studio Volunteers who had not had the chance for even temporary relief outside a city. We think the effects of this differentiated policy were entirely salutary. Within the ETV Project, we found no signs of jealousy or dissatisfaction among those not benefitted since it was perceived as dictated by actual differences in need.

An example of policy not being fitted to need, which we think had detrimental results, occurred in regard to transportation. Both the studio and the utilization Volunteers felt with some justification that they were unnecessarily deterred from doing a good job by rigid transportation policies primarily appropriate for community development Volunteers. Because of time pressure in television production and the need to move quickly from one working place to another in Bogota, the studio Volunteers often either had to use taxis or forego effectiveness. As a result, they often spent more than the portion of their living allowances presumably reserved for transportation. The situation was even more extreme for utilization Volunteers, who often were responsible for schools scattered over a wide area. Most spent far more than the transportation portion of their allowances even when using the cheapest kind of transportation. And those who always used the cheapest means -- unreliable buses -- often spent more time enroute than in schools. Special reimbursement, although possible in the abstract, was perceived by these Volunteers as discouraged. As a result, many of the ETV Volunteers either over-spent on transportation or were less effective than they might have been. On the other hand, community development Volunteers, for whom the policy was designed, often were able to spend less than the reserved portion of their allowances without sacrificing effectiveness. The ETV Volunteers often understandably felt that the Peace Corps simply did not take their jobs seriously enough. In addition, there was considerable concern among the Volunteers that the several jeeps assigned to the ETV Project would be lost because Peace Corps staff outside of ETV perceived them as special privilege rather than necessity. Because the jeeps were so obviously necessary for Volunteer technicians to service television schools and regional leaders to reach their Volunteers, we doubt whether this threat was real. However, the fact that the Volunteers thought it had some substance was a threat to morale and, in turn, effectiveness. To many of the ETV Volunteers, transportation policy seemed to indicate that image took precedence over performance.

As we have indicated, we suspect the problem lay in the attempt to make one policy fit all Volunteers regardless of job. In Colombia, because of the history of the Peace Corps there, this happened to be policy appropriate for Volunteers in community development. We urge -- and strongly -- that the job dictate policy. We also suggest that this is particularly important for large projects simply because policy affects so many Volunteers. In such cases, the cost of undifferentiated, tailored policy is high.

f) Prompt Volunteer assignment to specific tasks. Prompt assignment after arriving in a country is certainly desirable for any Volunteer. After our two years in Colombia with the ETV Project we are convinced that it is an important contributor to morale and attitude throughout the Volunteer's service. Placing the Volunteer in a well-structured task situation takes on special importance when he is to serve as part of a large, coordinated project. This is because such a Volunteer cannot make his own job since it must derive from the project, and any time "in limbo" will soon come to be perceived as a wasting of himself with detrimental consequences for morale as well as for productivity. In this kind of project only the assignment of a Volunteer to a job that is clear-cut can give the Volunteer the reward from achievement that is so necessary for his effectiveness. In the large project, we think that prompt assignment of Volunteers to specific, well-structured tasks lays a crucial foundation for their future service.

We thought, for example, that the in-processing of the 1965 utilization Volunteers was a model of effective treatment. Within a few days of arrival in Colombia they were at work in sites throughout the country. In the interim, they received an extensive presentation from the ETV project director and Volunteers in addition to the briefings given all new Colombia Volunteers and were assigned in accord with personal preferences based on their new knowledge of the project. Immediately after reaching their sites, they met the Colombians with whom they would work. On the whole, they were fitted into well-structured positions. As a result, we believe that they became fully effective months sooner than the 1964 utilization Volunteers inaugurating the project who were largely left to define their own role and work out their own assignments. We recognize, of course, that the 1965 in-processing rested on a year and a half of operation and that pioneering involves unavoidable trial-and-error. Nevertheless, we believe that with accurate advance role specification, previously discussed, even a new project can approximate the essential factors of the 1965 in-processing -- prompt assignment to specific tasks. In the large project, this should be one of the major goals of planning. The dividends, since so many Volunteers are involved, are large.

g) A schema and timetable for host country organization-building. When a large, complex Peace Corps operation has the goal of building a comparable host country organization we think that a detailed, comprehensive plan for such development would increase Volunteer effectiveness. Such a master plan would begin with a specification of the functions which must be fulfilled for host country operation to be independent and successful. It would be elaborated with the positions and resources required for such fulfillment, and alternative sources, ranked as to desirability, for these within the host country. It would include a delineation of the roles of Volunteers and staff in obtaining the necessary support. It would also include a specification of the qualifications demanded of personnel to serve as a guide for recruitment and training. It would also include a timetable for such development. We are sceptical that such a plan would lead to discouragement when goals were not reached if it were treated as a tentative, challenging outline for development. Since we are concerned with the Volunteers here, we will ignore the obvious benefits such a systematic approach would have for staff level persons concerned with the project. We think the sound basis it would provide for allocating future resources alone would recommend it. However, we also think it would contribute to Volunteer morale and effectiveness. It would boost morale by giving specification to answering the amorphous and nagging query of whether "they" -- meaning host country persons -- are "ready to take over," and it would increase effectiveness by setting forth what must be done to achieve this ultimate goal. We were disappointed that there was no such master plan for the ETV Project. We suspect it was another victim of the community development tradition where such systemized planning is not possible.

Summary and Discussion: We believe that the large, coordinated project -- which the ETV Project in Colombia exemplifies -- poses special problems for the Peace Corps. We have tried to specify some of the characteristics peculiar to this kind of project, the problems to which they give rise, and some of the things that can be done in prevention. We have used the ETV Project as an example and our views are the result of our two years of research in Colombia on the project. However, we think that what we have concluded applies broadly -- to other kinds of projects in other places and certainly to other instructional television ventures of a similar scale -- because the pertinent factors are of a general nature.

We found these characteristics of the ETV Project to be particularly relevant for its Volunteers: a) highly centralized organization encompassing a large number of Volunteers in a single undertaking; b) staff level direction by a substantive specialist; c) interdependence of groups of Volunteers performing markedly different jobs -- in more formal terms, the integration in a common effort of Volunteers in functionally distinct roles; d) geographical dispersion and relative isolation of Volunteers engaged in the same integrated project; e) dependence on cooperation and support from host country agencies; f) a goal of building a large, multifaceted host country organization to supplant that of the Peace Corps; g) consulting, not teaching, in the schools; h) continuity beyond a single Volunteer term of service of a complex organization; and, i) newness of the type of undertaking.

We found these characteristics gave rise in various ways to special problems: a) lack of coordinated, cooperative effort between Volunteers performing different functions; b) inappropriate recruitment and training; c) inaccurately defined and specified roles; d) defection; and, e) doubt over achievement.

We suggested that these problems could be mitigated by: a) advance detailed specification of Volunteer roles; b) joint training of Volunteers expected to coordinate activities, even if they will have very different jobs; c) strong project-oriented leadership; d) systematic, prompt dissemination of project information; e) appointment of Volunteer leaders for areas and specialized functions as soon as possible; f) special Volunteer conferences; g) in-service training for Volunteers; h) project-shaped policies; i) prompt Volunteer assignment to specific tasks; and, j) a schema and timetable for host country organization-building.

Because we were dealing with the complexities of a real life situation we did not feel justified in positing simple one-to-one relationships between solutions and problems or problems and characteristics. What we have tried to suggest is elementary but important: that the large, coordinated project poses special problems that demand special solutions. Our belief is that the framework set by the project is crucial for Volunteer performance. We have been especially concerned to show that the modal Volunteer -- who in Latin America is the community development Volunteer -- can be taken as the guide for other kinds of Volunteers only at the peril of effectiveness. We have also tried to show that in the large project there must be a special concern for performance -- partly because the absence of unique circumstances for every Volunteer makes it possible, partly because so many Volunteers are involved, and partly because the lack of alternative satisfactions make it the cornerstone of Volunteer well-being.

Part II: Some Findings on Volunteer Attitude Change

We now turn to some data on Volunteer attitude structure and changes in attitudes and perceptions during Peace Corps service. The source of the data is a questionnaire completed by the original ETV Volunteers shortly after they began service in Colombia and again about 18 months later just before their term of service ended. This questionnaire ranged widely over the attitudes and beliefs which the Peace Corps experience of these Volunteers might be expected to affect -- on Colombia, Latin America, the Peace Corps, non-Peace Corps U.S. agencies abroad, the ETV Project, Volunteer problems, and the like. Our main analyses are of two kinds: a) a factor analysis of the replies of all the ETV Volunteers to the 1964 questionnaire which maps the principal dimensions underlying the Volunteers' responses, thereby providing an empirical grouping of the highly varied individual items for a more orderly analysis of change during service, and b) an analysis of changes in attitudes and perceptions among the utilization Volunteers -- the sole Volunteer component in the ETV Project both large and homogeneous enough to make such study worthwhile. We will also present some additional findings not encompassed by these analyses.

Data-Gathering and Analysis

The results for both the factor analysis and attitude change are shown in Table 9:2. However, before examining them we will discuss briefly the questionnaire and the two modes of analysis. This will provide the background necessary for understanding Table 9:2.

The Questionnaire: One of the first things we did after arriving in Colombia in late January of 1964 was to construct a questionnaire to measure Volunteer attitudes, opinions, and views. We tried assiduously to cover all the major topics which seemed relevant to Peace Corps service. Since our sample was to be relatively small and confined to one project, and because we saw little point in duplicating standardized instruments already used by the Peace Corps in the processing of the Volunteers, we used an ad hoc approach. This is what we did: on the basis of discussions with Peace Corps staff and Volunteers in Colombia, we outlined the major topics for which Peace Corps service in ETV seemed likely to be especially pertinent; for each of these topics we wrote a number of structured attitude, opinion and perception items, some overlapping, intended to cover its principal aspects; then, on the basis of further discussions with staff and pre-testing with selected Volunteers we revised and eliminated items until we had a set that seemed technically adequate and comprehensive without excessive redundancy; finally, we augmented these structured items with open-ended follow-ups calling for amplification or justification as the Volunteer deemed necessary. The result was a questionnaire of about 60 structured items, most followed by one or more open-ended probes; some open-ended items, and some demographic items. Most of the structured items consisted of questions followed by seven-point scales whose ends were labelled with the possible extremes of viewpoint. The following item evaluation the Peace Corps as a whole is typical:

How effective do you consider the Peace Corps
as a whole at accomplishing its assigned tasks?

Not at all effective _____ _____ _____ _____ _____ _____ _____ Very effective

Why do you feel this way?____________________________

____

____

The Volunteer was asked to check the point on the scale most closely approximating his opinion. This seven-point scale form has been found to be sensitive in reflecting changes in the kinds of global attitudes we were interested in measuring and has a reputation, based on its use with word-opposites in Osgood's "semantic differential," of reliability.[4] There were also a few structured items with dichotomous or trichotomous alternatives, including a check-list of the latter sort calling for ratings of the seriousness of various problems confronting Volunteers, incorporated intact from a questionnaire used before by Peace Corps staff in Colombia. The 1964 questionnaire appears in Appendix A; the 1965 terminal questionnaire was identical except for the changing of verb tenses when necessary, the elimination of some items deemed no longer useful, the elimination of the already available demographic battery, and the addition of some questions especially pertinent at end of service.

This Volunteer questionnaire was first completed by the original ETV Volunteers in late February and early March of 1964, shortly after they began work. It was completed again by these Volunteers in 1965 within a month of the end of their standard, two year term of service. Both times, it was completed in private by the Volunteer at his leisure with a promise of anonymity and returned to us in a sealed envelope.

Because we were dealing with opinions on issues, and since it was clear to the Volunteers that their replies, whatever their content, would have no consequences for them personally, we did not rigidly control the conditions of completion. Under these circumstances, we feel that if a Volunteer chose to discuss an issue raised by our questionnaire with his peers before answering, it could only have led to the reflection in our measurement of a more meaningful and honestly held opinion. The Volunteers cooperated generously: we obtained completed questionnaires from 79 of the 82 initially assigned to ETV in the first administration when the pressures of preparing for departure somewhat reduced response.

On the whole, we found the questionnaire to be a success. Our factor analysis gave us confidence in the meaningfulness of the replies in a number of ways through the resulting item groupings, and our change analysis indicated that we had tapped some issues on which Volunteers changed during Peace Corps service. However, our use of the questionnaire data was not limited to these analyses. We also read the Volunteers' replies to the open-end questions carefully and these, along with the objective responses, provided a valuable supplement to what we learned in our close association with them. It was for this kind of background that we also administered the same kind of questionnaire to the replacement Volunteers arriving in 1965. We will not present this data statistically since our period in Colombia ended before their term of service and we have no terminal replies by which to assess change. Nevertheless, the data supplied by these Volunteers enlarged our perspectives on the Volunteer experience. This was true of all the Volunteer questionnaires. The information we gained from them is reflected throughout our reports on the ETV Project. We would emphasize, then, that what is to come represents only the statistical distillation of those portions of the questionnaire data suitable for such treatment in a meaningful way.

The Factor Analysis: We factor analyzed the replies of the original Volunteers to the initial 1964 questionnaire as a means of empirically grouping the items for the later analysis of change that we planned. In addition, we felt the analysis would provide an empirical test of the meaningfulness of the replies we were receiving. The empirical grouping, if we were receiving honest replies, should place together those particular items with an obviously common content -- for example, those items concerned with self-perceived competence in Spanish. We also felt that this mapping of principal dimensions of Volunteer attitude, although obviously limited by the coverage of the questionnaire, would be in itself intriguing just because it was based on the Volunteers' actual replies rather than our conjecture. On the whole, then, our purpose was exploratory. As a result, we included all the items in the initial questionnaire amenable to this kind of statistical treatment -- including some attitude items later omitted from the terminal questionnaire and some demographic items (such as urbanness of U.S. residence) that could be treated as scales.

The results of this factor analysis appear in the left hand portion of Table 9:2. The item identification (I.D.) number keys the item as described in the table to the actual question asked as shown in the questionnaire in Appendix A. For brevity and clarity, the items are described in the table in terms of the trait or attitude measured.

Those unfamiliar with factor analysis should understand that in this instance it involves the intercorrelating of the responses to the included items of all the responding Volunteers, and the subsequent grouping together of items for which the intercorrelations reveal some consistency in response.[5] Within any such grouping, of course, the individual items may be related positively or negatively and it is only the consistency in responses to them that has brought them together. For the items so grouped statistically there can be said to be a common underlying dimension or hypothetical construct or "factor." This hypothetical construct or abstract element may be looked at as subsuming replies to all the items in the factor. When the items in a factor have a recognizable common character, it is possible for the sake of convenience to assign a name to the factor representing the underlying construct. This naming is arbitrary, just as is the exact wording of an item in a questionnaire.

The factor loading, which appears in the second column of the left portion of Table 9:2, is an index of the amount of variance in item response attributable to the underlying construct. The square of each factor loading gives the proportion of this variance "falling in," "correlated with," or "explained by" the factor. Thus, a factor loading for an item of .80 means that 64 per cent of the variance in response to the item can be attributed to the factor. Because it is the square of the loading that indicates the amount of variance attributable to a factor, the importance of an item in a factor grows progressively with every increase in the size of the loading. For example, a loading of .40 represents 16 per cent of variance attributable to a factor and the loading of .80 represents 64 per cent, so that a mere doubling of the loading involves a *four times* increase in attributable variance. Thus heavy or large loadings indicate even stronger correlation of an item with a factor than their arithmetic superiority would suggest. The sign of the loading, plus or minus, indicates how responses to the item related to the factor -- positively or negatively.

The procedure was a principal axis factor analysis, varimax rotation (Pearson r's were computed for continuous items, point-biserial r's and/or four-fold point r's for dichotomous ones). We stopped extracting factors when the Eigenvalues dropped below 1.0. At this point, we had extracted 21 factors. In such an analysis, of course, all items have some index of loading for every extracted factor. The cut-off, or minimum loading after rotation for inclusion in a factor, was arbitrarily set at .40. For the full matrix of loadings of all 64 variables on the 21 extracted factors, see *Appendix C*.

The factor analysis was based on the responses of all 79 Volunteers who completed the initial 1964 questionnaire. In *Table 9:2* we show the results of this analysis for all the 64 variables measured in this questionnaire open to such treatment. For reasons we shall discuss shortly, the change data, although classified on the basis of the factor analysis, are based on a much smaller group of Volunteers. Also, items not appropriate for change analysis and therefore not included in the terminal questionnaires are, of course, not accompanied by change data, although included in the factor analysis. Limiting the factor analysis to items repeated in the terminal questionnaire would have led to a smaller table and lightened the task of discussion. We saw little point in curtailing our data by such a retrospective re-analysis since there seemed little likelihood that it would have resulted in any meaningful regrouping of the items for which there are change data.

Because the heavy loadings are so much more important, we have adopted a scheme to highlight them. Those near or greater than .70 (one was .69), representing about 50 per cent or more of item variance, are in brackets. As the more important components of a factor, these are the items on which our naming or characterizing of the underlying dimension is principally based. Those between .50 and .68 (25 per cent or more of the variance) are underlined, and those between .40 and .49 are unmarked. We discuss these to the extent they seem to augment the meaning attached to the factor. When an item had a loading of .40 or greater on more than one factor it of course appears in each of the relevant factors. We will discuss the pattern emerging from the factor analysis in conjunction with the change data.

The Change Analysis: The data on changes in response to the 48 attitude, opinion and perception items between the initial early service questionnaire of 1964 and the terminal questionnaire of 1965 appear on the right hand side of Table 9:2. All of these items have been treated so that a higher score means an increase in regard to the variable. The data include the initial mean for the group, the terminal mean, the amount of increase or decrease (with the initial mean always subtracted from the terminal mean), the t resulting from the statistical assessment of change in the two correlated means, and the statistical significance of whatever change occurred (p.). the p. represents a two-tailed assessment since we did not feel justified in formally predicting the direction of change that might occur, although in some cases we had a strong expectation as to what actually transpired (such as the significant lowering in evaluation of Peace Corps training). As a result, we have presented all p.'s = or < .10 (a one-tailed p., appropriate when a formal prediction or hypothesis is entertained, is half of a two-tailed p., so this allows the reader who might offer such prognostications to see which changes attained the conventional criteria for significance of p. = or < .05). The number of Volunteers replying to the item in both questionnaires on which the change data is based appears in the final column on the right.

Thus, reading across, we find that the first item concerned the Volunteer's views on "Colombian potential for a high standard of living", the initial mean for this seven-point scale item was 4.64 and the terminal mean 5.45, for which the difference was +.82 (5.45 - 4.64 actually = .81; such inconsistencies occur because subtraction was made before rounding computations originally carried out to eight decimal places); the resulting t = 2.88, which is statistically significant, for p. < .01; and the number of Volunteers whose replies were analyzed was 22. The group as a whole, then, increased its belief in the Colombian potential for a high standard of living.

In this analysis of attitude change during Peace Corps service we limited ourselves to the utilization Volunteers who served throughout their overseas period in this assignment. This was the group designated in training as "Colombia XIII" in the Peace Corps nomenclature of the time. Of the 45 "Colombia XIII" Volunteers who entered the ETV Project in 1964 to serve in utilization, 31 remained in the project at termination, and of these we obtained completed initial and terminal questionnaires from 22 who had served without interruption in utilization. We also had completed sets of questionnaires from 19 other original ETV Volunteers who had remained in the ETV Project -- eight of 10 "D.R." Volunteers, six of nine studio ("Colombia VIII") Volunteers, and five other Volunteers from "Colombia XIII" who had served extensively outside utilization. For a number of reasons, we decided to present only the data on the homogenous group of Volunteers who trained together and served exclusively in utilization. Our intent was to offer only data that are truly meaningful.

Because reducing the number of cases might seem surprising since magnitude increases the ease of finding significant shifts, we will outline our reasons. When we began our association with the ETV Project, we naively viewed the Volunteers as relatively homogeneous because of their involvement in the same project. We quickly changed our minds. We found that they divided into definite sub-groups on the basis of training and project assignment. We concluded that training is such an important influence in forming Volunteer perspectives and opinions that we would not be justified in looking upon the three separately trained groups in ETV -- "Colombia XIII," "Colombia VIII," and "D.R." -- as combinable for studying attitude change. In addition to the actual experience of common training, of course, there is also the difference training as a group implies regarding uniformity of criteria for recruitment and training. In the ETV Project, the "D.R." group was set apart by having been recruited and trained for education in the Dominican Republic before being rerouted to ETV in Colombia; "Colombia VIII" by recruitment and training for television production; and "Colombia XIII" by recruitment and training for utilization, except for a few to be assigned as technicians. We also concluded that the kind of assignment was likely to figure in the sort of attitudes with which we were concerned. We have already discussed the functional division of the Volunteers in ETV by studio, utilization, and technician assignments. We felt that the circumstances encountered by the Volunteers in these tasks during service were too different to justify combining them. For all these reasons, we decided that there was not one but several groups of ETV Volunteers when it came to studying attitudes.

As a result, we analyzed the attitude change data separately for the three separately trained groups, with further restrictions to increase homogeneity within each. For "Colombia XIII" we excluded the few technicians and any Volunteers who had transferred within ETV out of utilization. No special exclusions were necessary for "Colombia VIII" and "D.R." All of the former who remained in ETV also remained throughout in the studio. The latter varied and changed somewhat idiosyncratically in assignment. Most began in television programming, assisting in the preparation of scripts and the TV Teacher Guides for classroom teachers, but at the end of the project's first semester in June, 1964, were transferred to utilization; we treated them as a group. This left so few for analysis among the "Colombia VIII" (six) and the "D.R." (eight) groups that it was almost impossible for significant changes in response to occur. Although we examined these data for whatever heuristic value they might have, we saw no point in including them in our presentation. On the whole, the trend of scores for these two small groups paralleled that for the 22 "Colombia XIII" utilization Volunteers.

The change data, then, represent a group of Volunteers who trained together, were recruited and selected under uniform criteria, and served in one project in one country in the same kind of assignment throughout their Peace Corps service. In our view, we can measure change more sensitively by concentrating on such a homogeneous group, and therefore more meaningfully. The rationale is that by restricting diversity of experience among the sample we control variation that might hamper the detecting of changes.

The Results

Both the factor analysis and change data appear in Table 9:2. The factor loadings and key to the actual item in the questionnaire (Appendix A) are to the left of the description of what was measured, and the change data are to the right. The factor analysis was based on the responses of 79 original ETV Volunteers in all phases of the project. Sixty-four variables or items, including some demographic data, were included in the factor analysis. The change data represent a homogeneous group of 22 utilization Volunteers. Change data are shown for 48 items. The absence of change data for an item included in the exploratory factor analysis indicates that it was not repeated in the terminal questionnaire, unless otherwise noted in the table. We have arbitrarily named the factors on the basis of the subsumed items when we felt it was justifiable.

The 64 variables drawn from the initial questionnaire, the product of our careful effort to encompass all the major topics pertinent to service, proved to be distributable into 21 factors except for four attitude and one demographic items which did not reach the criterion

Table 9:2: The Volunteer Questionnaire -- Factor Analysis of Early Service Replies and Data on Changes During Service

Factor Analysis (N=79)			Change During Service (N=22)					
			Mean Scores					
Item I.D. in Factor Analysis	Factor Loading of Item	Item Content	Beginning of Service	End of Service	Diff.	t.	P.	N.
		Factor I						
48	[.71]	Colombian potential for a high standard of living	4.64	5.45	.82	2.88	<.01	22
49	[.74]	Colombian potential for democratic, responsive government	4.18	4.00	- .18	.48		22
51	[.75]	Colombian potential for a high level of education	4.32	5.09	.77	2.31	<.05	22
53	[.82]	Latin American potential for a high standard of living	4.36	4.82	.45	1.80	<.10	22
54	[.86]	Latin American potential for democratic, responsive government	3.95	3.90	- .05	.16		21
56	[.85]	Latin American potential for a high level of education	4.55	4.64	.09	.32		22
		Factor II						
8*	.57	Increased federal government role in aid within U.S.	2.05	2.30	.25	.93		20
20*	[.87]	Independence in problem solving						
21*	[.88]	Need for information regarding project						
22*	[.77]	Need for association with others to fulfill Volunteer role						
31*	.55	Self-evaluation of cooperative skills	7.68	8.14	.45	1.34		22
39*	.54	Worry over adequacy of staff attention	1.41	1.64	.23	1.42		22
42*	.52	Worry over "other" problems						
43*	[.73]	Change in personal goals since joining Peace Corps	1.76	1.67	- .10	1.00		21

Table 9:2 (continued)

Item I.D. in Factor Analysis	Factor Loading of Item	Item	Mean Scores Beginning of Service	Mean Scores End of Service	Diff.	t.	P.	N
		Factor III						
25	[.90]	Spanish speaking proficiency						
26	[.93]	Spanish writing proficiency						
27	[.89]	Spanish reading proficiency						
33*	[.81]	Worry over ability to communicate in Spanish	1.82	1.64	- .18	1.45		22
		Factor IV						
2	.52	Desire for changes in non-Peace Corps agencies abroad	4.89	5.26	.37	.80		19
14	.41	Perception of importance of own job in ETV	6.05	5.82	- .23	1.10		22
23	.53	Evaluation of Peace Corps training	5.48	3.67	-1.81	4.17	<.001	21
44	[.88]	Expectation of making Colombian friends	5.90	4.57	-1.33	3.18	<.01	21
45	.60	Making Colombian friends thus far	3.10	3.86	.76	1.75	<.10	21
46	[.69]	Expectation that friendships with Colombians would be deep and lasting	3.95	3.74	- .21	.39		19

Table 9:2 (continued)

Item I.D. in Factor Analysis	Factor Loading of Item	Item	Mean Scores Beginning of Service	Mean Scores End of Service	Diff.	t.	P.	N
		Factor V						
13	.56	Benefits to underdeveloped country of private U.S. business	4.73	5.36	.64	1.88	< .10	22
36*	[.80]	Worry over living allowance	1.50	1.73	.23	1.56		22
		Factor VI						
50	[.82]	Colombian need for strong leader	5.27	5.45	.18	.39		22
55	[.89[	Latin American need for strong leader	5.05	5.23	.18	.47		22
		Factor VII						
29*	[.86]	Self-evaluation of organizing ability	6.05	7.59	1.55	4.46	< .001	22
30*	[.89]	Self-evaluation of leadership ability	5.91	7.55	1.64	5.02	< .001	22
		Factor VIII						
40*	.49	Worry over friendliness of local people	1.14	1.32	.18	1.45		22
61**	.55	Marital status: single; married						
64**	[.84]	Preparation in training for service in Colombia						

Table 9:2 (continued)

Item I.D. in Factor Analysis	Factor Loading of Item	Item	Mean Scores Beginning of Service	 End of Service	Diff.	t.	P.	N
		Factor IX						
10*	.44	Degree receipient country should have authority over use of U.S.aid	2.19	2.00	- .19	1.45		21
24	.52	Proficiency in task assigned	4.26	4.21	- .05	.14		19
37*	[-.84]	Worry over technical skills for job	1.14	2.05	.91	5.26	<.001	22
		Factor X						
17	-.47	Satisfaction with own job performance	4.73	5.41	.68	2.06	<.10	22
35*	[.71]	Worry over ability to see results	1.55	1.55	.00	.00		22
42*	.49	Worry over "other" problems						
		Factor XI						
42*	-.48	Worry over "other" problems						
47	[.77]	Effectiveness of Colombian government in solving problems	2.55	2.36	- .18	1.00		22
52	.63	Effectiveness of Latin American governments in solving problems	2.55	3.05	.50	2.22	<.05	22
		Factor XII						
5	[.71]	Evaluation of ETV Project	4.29	5.50	1.21	2.58	<.05	14
11*	-.48	Degree U.S. should manipulate country receiving aid to secure success of projects	1.53	1.40	- .13	.81		15

[Factor XII is continued on next page]

Table 9:2: (continued)

Item I.D. in Factor Analysis	Factor Loading of Item	Item	Mean Scores Beginning of Service	Mean Scores End of Service	Diff.	t.	P.	N
		Factor XII (continued)						
15	.44	Degree feels self to be in ETV mainstream	5.43	4.81	-.62	1.38		21
16	[.81]	Predicted success of ETV Project	4.73	5.32	.59	2.20	<.05	22
18	.57	ETV contribution outside of television education program	5.59	5.23	-.36	1.02		22
		Factor XIII						
11*	.55	Degree U.S. should manipulate country receiving aid to secure success of projects	1.53	1.40	-.13	.81		15
59**	.60	Urbanness of U.S. residence						
		Factor XIV						
38*	[.90]	Worry over keeping "problem" Volunteers in Colombia	1.68	1.73	.05	.24		22
39*	.40	Worry over adequacy of staff attention	1.41	1.64	.23	1.42		22
		Factor XV						
15	.40	Degree feels self to be in ETV mainstream	5.43	4.81	-.62	1.38		21
17	.41	Satisfaction with own job performance	4.73	5.41	.68	2.06	<.10	22

(Factor XV is contintued on next page)

Table 9:2: (continued)

Item I.D. in Factor Analysis	Factor Loading of Item	Item	Mean Scores Beginning of Service	End of Service	Diff.	t.	P.	N
		Factor XV (continued)						
28	.56	Progress in learning Spanish						
58**	[.79]	Sex: male; female						
		Factor XVI						
62**	[.78]	Educational degree						
		Factor XVII						
1	[.82]	Evaluation of non-Peace Corps agencies abroad	4.05	3.91	-.14	.44		22
2	-.50	Desire for changes in non-Peace Corps agencies abroad	4.89	5.26	-.37	.80		19
		Factor XVIII						
57**	-.58	Age						
63**	[.82]	Relevance of Volunteer's past work experience to ETV assignment						
		Factor XIX						
34*	[.85]	Worry over health	1.36	1.36	.00	.00		22
		Factor XX						
3	.47	Evaluation of Peace Corps effectiveness	5.32	4.86	-.45	1.29		22
7	[.74]	Degree U.S. should try to solve problems abroad	5.76	5.33	-.43	1.09		21
9	[.73]	Degree of U.S. financial assistance desirable	2.77	2.77	.00	.00		22

Table 9:2: (continued)

Item I.D. in Factor Analysis	Factor Loading of Item	Item	Mean Scores Beginning of Service	Mean Scores End of Service	Diff.	t.	P.	N
		Factor XXI						
3	-.40	Evaluation of Peace Corps effectiveness	5.32	4.86	-.45	1.29		22
4	.59	Desire for changes in Peace Corps	3.00	4.41	1.41	3.69	<.01	22
6	[.80]	Desire for changes in ETV Project	3.56	4.17	.61	1.24		18
		Unclassifiable within Factors:						
32		Worry over support from Colombian officials	2.32	2.55	.23	1.25		22
41		Worry over dangers other than those to health	1.36	1.27	-.09	.62		22
12		Benefits to underdeveloped country of a big tourist industry	4.00	5.14	1.14	2.87	<.01	21
19		Self-evaluation of ability to handle unfamiliar tasks	5.10	5.10	00	00		20
60**		Breadth of post-high school educational environment						

Table 9:2: (continued)

Notes:

*Attitude and perception items not of the seven-point scale type. Those beginning "Worry over---" (items 32-42) come from a battery of things the Volunteer might perceive as problems for himself, each of which was rated trichotomously as "serious," "minor," or "no problem at all." The final one (42), "other" problems, allowed the Volunteer to make his own additions, and was omitted from the change analysis because only a few specified such problems in both questionnaires (they could not rate anything if they did not specify it). Items 29 and 30, on organizing and leadership abilities, were on a 10-point scale. Other non-seven-point scale items were dichotomous or trichotomous (see the questionnaire, Appendix A).

**Demographic items. The coding information necessary for interpreting the loadings is given in the text.

loading (.40). More than half the items, 36, had loadings that were quite high at .69 or greater. Except for four loadings of the demographic items (item 64, training for Colombia, in Factor VIII; item 58, sex, in Factor XV; item 62, education, which by itself constituted Factor XVI; and item 63, relevance to ETV of work experience, in Factor XVIII), all these high loadings involved attitudes or perceptions. Of these 32 high loadings involving attitudes or perceptions, 15 fell into five factors composed exclusively of such high loadings (these included the six items of Factor I, the four of Factor III, the two of Factor VI, the two of Factor VII, and the one of Factor XIX), and the others were distributed over 11 other factors that included items with lower loadings.

The factor results gave us considerable confidence in the questionnaire. The number of factors indicated that we approached the comprehensiveness we sought; the heavy loading on different factors of items appearing consecutively with identical format in the questionnaire indicated we obtained meaningful measurements, as did the consistency with which certain overlapping items loaded on the same factors; the number of quite high loadings on different factors indicated we measured some relatively independent issues.

When we turned to the change data, we found a number of significant shifts in Volunteer attitudes and perceptions during service. Of the 48 items on which change was measured, there were 12 for which the change was significant ($p. < .05$, two-tailed) and four others for which the change approached significance ($p. < .10$, two-tailed). The 12 appear in seven different factors, with one of these items unclassifiable by factor, suggesting change in a large number of areas.

We will discuss the changes in conjunction with the factor analysis:

Factor I: "Belief in Latin Potential for Progress." Six items calling for assessments of Colombia and Latin America's potential for social progress loaded or correlated above the criterion of .40 with this factor (henceforth, we will simply use the terms "loaded" or "correlated" with the understanding that the criterion was exceeded). All did so exclusively and heavily (.71 to .86). The items covered three aspects of social progress -- standard of living, democratic and responsive government, and high level of education -- with a separate item on each for Colombia and Latin America. However a Volunteer viewed potential for progress in these spheres for Colombia and Latin American when he began service, he tended to be uniformly optimistic or pessimistic; that is, opinions across the three aspects of progress and two socio-political units were highly correlated, indicating a single underlying dimension governing responses. These six items were part of a battery of 10 on five social aspects of Colombia and Latin America; the other aspects, need for a strong leader and government effectiveness in solving problems, also were represented by separate items for country and continent. The loading of these other four items elsewhere (those on a strong leader in Factor VI, and those on government effectiveness in Factor XI) increases confidence greatly in the validity of responses to the questionnaire; proximity and identical format would augment any tendencies toward mechanistic, indifferent responding (as "response set") and, if present, all 10 in the battery would be expected to load together.

There were several significant or near significant changes in opinion on these six items. The data indicate that the Volunteers increased their evaluation of Colombian potential for a high standard of living (p. < .01, two-tailed) and Colombian potential for a high level of education (p. < .05, two-tailed). The latter is particularly noteworthy, since these Volunteers spent their entire Peace Corps service working at the school level for this very goal; it indicates that their extensive experience at the grassroots increased their optimism. Since this change was accompanied by an increase in evaluation of the effectiveness of the ETV Project (see item 5, Factor XII) and an increase in the degree of eventual success predicted for the project (item 16, Factor XII), it also probably reflects a growth in confidence in the impact such large scale modernizations as instructional television can have. There was also a near significant change in the evaluation of the Latin American potential for a high standard of living (p. < .10, two-tailed).

Factor II: "Concern for Personal Goal Achievement." Eight items loaded on this factor, several with relatively low loadings. It is far less easily characterizable than Factor I where all the items had a readily identifiable common theme. We have named it with some hesitation on the basis of the four items with exclusive and relatively high loadings. These concerned independence in problem solving (item 20, loading of .87), need for information on project activities (21, .88), need for association with other persons to fulfill Volunteer role (22, .77), and change since joining Peace Corps in personal goals (43,.73).

Underlying the correlation of responses to these items would seem to be a concern with personal accomplishment. The Volunteer who prefers to solve problems independently wants more information on the project in which he is working, wants to become more involved with others in his work, and has reassessed his own goals since entering the Peace Corps. The underlying dimension is certainly not synonymous with confidence in personal skills since self-evaluations of leadership and organizing abilities loaded elsewhere (Factor VII). The loading on this factor of worry over the adequacy of staff attention (39, .54) and worry over "other" problems individually specified by the Volunteer (42, .52) fits this interpretation since these also represent a concern with achievement. The same can be said of self-evaluation of cooperating ability (31, .55); the absence of loadings for self-evaluations of leadership and organizing abilities indicates that the dimension encompasses confidence in being able to work with others apart from belief in ability to take charge of an activity.

We suspect that what is involved is a very personal concern for achievement in the mode of a Volunteer working as an equal with others, accompanied by considerable self-examination over goals and anxiety over the conditions -- staff help and association with other persons -- that would facilitate achievement. We can offer no plausible explanation of the loading of advocacy of increased governmental aid for depressed segments of U.S. society (8, .57), unless it can be taken as a reflection of the obvious concern for practical accomplishment and cooperative effort expressed in the other items.

There were no significant changes among the four items repeated in both questionnaires.

Factor III: "Self-confidence in Language Skills." Four items concerned with confidence in using Spanish loaded exclusively and heavily (.81 to .93) on this factor. The three concerned with self-evaluations of speaking, writing, and reading skills were not repeated in the terminal questionnaire since it seemed obvious that almost two years of practice would increase proficiency. The item on worry over ability to communicate in Spanish was repeated since it was part of a problem checklist which we thought it advisable to keep intact. There was no significant change in worry over ability to communication in Spanish.

Factor IV: "Orientation Toward Foreign Culture." Six items loaded on this factor. One, expectation of making Colombian friends, loaded exclusively and very heavily (44, .88). Two similar items on the actual making of friends (45, .60) and the expectation of deep friendships (46, .69) also loaded exclusively and fairly heavily. Other items concerned the evaluation of Peace Corps training (23, .53), the importance of the Volunteer's own job in ETV (14, .41), and desire for changes in non-Peace Corps agencies abroad (2, .52). On the basis of the three items on friendship, and corroborative evidence from the open-end replies to the other items, we suspect the underlying consistency is a positive orientation toward foreign cultures. For example, the kinds of changes the Volunteers desired in non-Peace Corps agencies were greater involvement with "the people," less isolation in residential enclaves of personnel, and increased emphasis on presenting a favorable image of the "American way of life." Favorable evaluation of Peace Corps training can be thought of as stemming from its perception as an example of specialized preparation for this kind of person-to-person service.

The Volunteer who was optimistic after a few weeks of service about friendships also at this time evaluated Peace Corps training favorably and desired changes in other U.S. overseas agencies in the direction of more personalized involvement. The loading for the evaluation of own job importance is quite low, and does not merit discussion.

There were two significant and one near-significant changes among the measurements. The evaluation of Peace Corps training declined markedly ($p. < .001$, two-tailed). We have already discussed the reasons for this disturbing negative shift among these uitlization Volunteers. As we have said, their training did not touch on their important function as "school developers." Their feeling that training did not accurately or sufficiently characterize their job for them in advance was reflected in items included only in the terminal questionnaire: about half said their job had not been what they had expected it to be, and about half also said their on-the-job relationships with Colombians differed from what they had expected. In addition, their preparation in teaching methodology in their opinion proved woefully inadequate. In the open-end follow-up to the training evaluation item, the principal criticism of Peace Corps training was that it did not provide enough instruction on teaching. It is hardly surprising, then, that when these Volunteers were asked whether they felt changes should be made in Peace Corps training in a separate question in the terminal questionnaire, 20 of the 22, or about 96 per cent, said "Yes." In explaining the changes they would recommend, the dominant theme was greater specificity and more detailed information about the proposed assignment -- the institutions, activities, situations, and people it will involve -- and especially specific training in the skills required to do the job well. A few also urged even greater training in conversational Spanish. Some typical comments:

"More emphasis on specific skills needed for a particular project."

"More specific, current orientation regarding host country entities with which the Volunteer will work."

"More specialized training in the job you are going to do -- in our case, teaching methods and teacher training."

"Training should be less theoretical -- it should try to arm the Volunteer with the practical knowledge and experience he needs to do his job (I'm sure most training is more practical -- trouble with ours was that no one knew what our job was going to be.)"

The other significant change, as well as the near-significant change, occurred in connection with their making of Colombian friends during service. In the terminal questionnaire, they significantly decreased in their estimate of what their expectation as to number of friends-to-be-made had been when they completed the initial questionnaire (p. < .01, two-tailed); that is, in the first questionnaire they indicated their expectations, and in the terminal questionnaire they indicated their recall of what their early expectation had been, with the latter turning out to be significantly lower. The accompanying open-end probes brought explanations of why they had not made as many friends as expected. The meaning of the retrospective revision would seem to be that they were disappointed in the number of friends made, and adjusted their memories in accord. The near-significant change involved an increase in the actual number of friends made since the first few weeks in Colombia

(p. < .10, two-tailed). They did make friends, but not as many as they initially had hoped.

Factor V:"Concern With Material Well-Being." Two items loaded on this factor, both exclusively but only one heavily. The heavy loading was for worry over adequacy of Volunteer living allowances (36, .80), the lesser loading for belief in the benefits of private U.S. investment and business activity to an underdeveloped country (13, .56). That is, the Volunteer who expressed worry over getting along on his living allowance also was somewhat inclined to think relatively highly of the benefits private U.S. investment brings to a country. The heavy loading for worry over allowances suggests a concern with material well-being as the underlying dimension, an interpretation with which a positive regard for business would not be inconsistent. There was a near-significant change on the business item, with the Volunteers showing some sign of increasing their estimate of the degree private investment benefits an underdeveloped country (p. < .10, two-tailed).

Factor VI: "Belief in Latin Need for Strong Leaders." Two items on belief in Colombia and Latin America's need for a strong leader loaded exclusively and heavily (.82 and .89) on this factor. We have simply named the factor after the items. There were no significant changes on these items.

Factor VII: "Self-confidence in Leadership Capability." Two items calling for self-evaluations of organizing and leadership abilities loaded exclusively and heavily (.86 and .89) on this factor. The underlying dimension can be readily characterized as self-confidence in leadership capability. There were highly significant changes on both these self-evaluations, with marked increases occurring both in regard to self-estimates of organizing abilities (p. < .001, two-tailed) and self-estimates of leadership abilities (p. < .001, two-tailed). We would interpret these changes more broadly as indicating very definite personal gains in self-confidence during service.

Factor VIII: "---------------." Three items loaded on this factor. One, loading exclusively and heavily, was a demographic item (64, .84); broadly, it might be thought of as reflecting the pertinence of Peace Corps training to service in Colombia and the ETV Project; concretely, it represented the dichotomization of the Volunteers into "Colombia VIII" and "XIII" vs. the rerouted "D.R." Volunteers and reflects any other attributes that might distinguish these groupings from each other. Another demographic item, marital status, tended to load here (.55) because there were proportionately more couples in the "D.R." group. Worry over friendliness of local people also loaded (.49). With no variables other than "D.R." membership loading heavily, we see no profit in trying to characterize an underlying dimension. It could be argued that the loading here of the worry item reveals a peculiarly connubial concern. There was no significant change on the worry item.

Factor IX: "Self-confidence in Capability of Contributing." One item, worry over technical skills for the job, loaded exclusively, heavily, and negatively (37, -.84) on this factor. Two others loading were on the degree a recipient country should have control over U.S. aid (10, .44) and self-perceived task proficiency (24, .52). That is, the Volunteer who was not concerned over his job competence was inclined, as might be expected, to rate himself highly in task proficiency. He was also somewhat inclined to think that a country should have relatively great control over U.S. aid. On the basis of the two heavier loadings, we have characterized the underlying dimension as self-confidence in capability of contributing to the country and project. Possibly, belief in host country control correlates with confidence in proficiency as the result of an accompanying conviction that special conditions are not necessary to be able to achieve.

There was one highly significant change. The Volunteers expressed markedly more worry over their technical skills for the utilization assignment at the end of service than they did after their first few weeks (p. < .001, two-tailed). This fits with their significantly lower evaluation of the adequacy of Peace Corps training at the end of service (see item 23, Factor IV) and everything else we know about these Volunteers. They concluded, on the basis of their experience, that they did not have the preparation to make as great an educational contribution as was possible.

Factor X: "Anxiety Over Achievement." Three items loaded on this factor. One, worry over the possibility of seeing visible results of Volunteer effort, loaded exclusively and heavily (35, .71). Other loadings were for satisfaction with own job performance (17, -.47), which loaded elsewhere (Factor XV), and for worry over "other" problems (42, .49), which also loaded elsewhere (Factors II and XI). That is, the Volunteer who was anxious over being able to see results was also inclined to rate his performance as low (the loading was negative for this item). Worry over individually specified problems, presumably affecting task performance, was correlated with this. We have characterized the underlying dimension as anxiety over achievement.

There was a near-significant change in regard to satisfaction with job performance, with the Volunteers showing some sign of increasing their satisfaction (p. < .10, two-tailed). Thus, there is some evidence that the Volunteers gained considerable personal reward from their work despite the dissatisfactions expressed in their lowered evaluations of Peace Corps training and increased worry over the adequacy of their skills.

Factor XI: "Belief in Effectiveness of Latin Governments." Three items loaded on this factor. One, on the effectiveness of the Colombian government in solving problems, loaded exclusively and heavily (47, .77). Another, on the effectiveness of Latin American governments in solving problems, also loaded exclusively and only somewhat less heavily (52, .63). We have named the factor after these two items. Worry over "other" problems correlated inversely (42, -.48). There was a significant change, with the Volunteers increasing their estimates of the effectiveness of Latin American governments (p. < .05, two-tailed).

Factor XII: "Satisfaction With the Project." Five items loaded on this factor. Two with exclusive and heavy loadings concerned the predicted eventual success of the ETV Project (16, 81) and an evaluation of the project's overall effectiveness to date (5, .71). The third highest loading, also exclusive, concerned the estimate of the general contribution to Colombia of the project (18, .57). We have characterized the underlying dimension as Volunteer satisfaction with his project. Correlated items included self-perception of being in the mainstream of project activities (15, .44) and belief that the U.S. should manipulate if necessary to achieve goals in foreign aid (11, .48). These latter two loadings suggest a correlation between satisfaction and identification with a project.

There were two significant changes. Prediction of eventual success for the ETV Project increased (p. < .05, two-tailed), and evaluation of the project's overall effectiveness increased (p. < .05, two-tailed).

Factor XIII: "---------------." The two items loading on this factor were degree of urbanness of U.S. residence (59, .60) and belief that the U.S. should manipulate to achieve aid goals (11, .55). We have not named an underlying dimension, although the correlation of urban background and advocacy of manipulating is tempting to speculate upon. There was no change on the manipulation item.

Factor XIV: "Concern Over Volunteer Image." One item loaded exclusively and heavily on this factor: worry over keeping "problem" Volunteers in Colombia (38, .90). On the basis of this loading, we have characterized the dimension more broadly as concern over Volunteer image, which would be adversely affected by "problem" Volunteers. A second item correlating was worry over the adequacy of staff attention (39, .40), which also loaded elsewhere (Factor II). There were no changes on these items.

Factor XV: "---------------." One item, sex of respondent, loaded exclusively and heavily (58, .79) on this factor. Since the higher coding was arbitrarily assigned to females, the other items may be thought of simply as correlates, but not high ones, of this attribute among the Volunteers in this project at its outset: degree of feeling in the mainstream of the project (15, .40; also on Factor XII); satisfaction with own job performance (17, .41; also on Factor X); and self-assessed progress in learning Spanish (28, .56). There was a near significant change on the satisfaction with job performance item, as discussed in regard to Factor X.

Factor XVI: "Education." The demographic item on education loaded exclusively and heavily (.78) by itself here.

Factor XVII: "Satisfaction With U. S. Agencies Abroad." Two items loaded on this factor, with the loading of one exclusive and heavy: assessment of the effectiveness of non-Peace Corps U.S. agencies abroad (1, .82). The other loading was for desire for changes in these agencies (2, -.50), which also loaded elsewhere (Factor IV). That is, the Volunteer who rated these agencies highly also was not inclined to desire changes in them (the loading on this item was negative). We have characterized the underlying dimension as satisfaction with U.S. agencies abroad (other than the Peace Corps). There were no significant changes on these items.

Factor XVIII: "Relevance of Experience to Project Job." One demographic item, relevance of pre-Peace Corps work experience to the assignment in ETV, loaded exclusively and heavily (63, .82) on this factor; relevant experience was defined as work either in radio-television or education, such as teaching. Another demographic variable, age, loaded negatively (57, .-.58), an artifact of the possession by slightly younger Volunteers in this project of more relevant pre-Peace Corps work experience.

Factor XIX: "Concern Over Physical Well-Being." One item, worry over dangers to health, loaded exclusively and heavily (.85) by itself on this factor. This solitary loading is of interest because of the indicated lack of correlation with the dimensions represented by other factors -- satisfaction with the project, anxiety over achievement, self-confidence in capability of contributing, and the like. Apparently, concern over health had no relationship to other feelings about satisfactory functioning. There was no change on this item.

Factor XX: "Support of U.S. Foreign Aid." Three items loaded on this factor. Two loaded exclusively and heavily: the degree the U.S. should try to solve problems abroad (7, .74) and the degree of U.S. financial assistance that should be offered (9, .73). The third item, evaluation of the Peace Corps' overall effectiveness, loaded less heavily (3, .47), and also loaded elsewhere (Factor XXI). That is, the Volunteer who believed the U.S. should try to solve problems abroad also advocated relatively sizable U.S. financial aid for foreign countries, and was somewhat inclined to evaluate highly the Peace Corps' effectiveness. We have characterized the underlying dimension as support of U.S. foreign aid. There were no changes on these items.

Factor XXI: "Desire to Re-Make Peace Corps and Project." Three items loaded on this factor. One, desire for changes in the ETV Project, loaded exclusively and heavily (6, .80). Another loading exclusively but less heavily, was desire for changes in the Peace Corps as a whole (4, .59). The third, evaluation of Peace Corps overall effectiveness, loaded negatively (3, -.40), and also loaded elsewhere (Factor XX). That is, the Volunteer who wanted changes in the project also desired Peace Corps changes, and tended somewhat to have a relatively low evaluation of the Peace Corps' effectiveness.

There was one significant change. The Volunteers increased in their desire for changes in the Peace Corps ($p. < .01$, two-tailed). In their specifications of kinds of changes desired, increase of staff support ("more staff and better overall direction," "staff generally should become closer to the work of the Volunteers," etc.) predominated although there was considerable variety.

Items Unclassifiable by Factor: Five items did not achieve the criterion loading of .40 on any one factor. Four concerned attitudes and perceptions: worry over support from Colombian officials; worry over dangers other than those to health; benefits to an underdeveloped country of a big tourist industry; and, self-evaluation of ability to handle unfamiliar tasks if called upon to do so in the project. One was a demographic variable, breadth of post-high school educational environment, which measured whether their college education had included an institution granting doctoral degrees. The lack of a sufficient loading on any one factor indicates these variables correlated with a large number of factors, but only relatively slightly with any one so that their variance was widely distributed (this is in contrast to variables constituting factors by themselves, for which the variance was not so distributed but reserved to themselves -- and hence to a separate factor). It implies nothing about the importance of the variable as a measure of Volunteer disposition. For example, the item on worry over support from Colombian officials measured a very important perception, for it was the problem in the problem checklist over which the Volunteers expressed the most concern.

There was one significant change among the four unclassifiable attitude and perception items. There was an increase in belief in the benefits a big tourist industry can bring to an underdeveloped country ($p. < .01$, two-tailed). This is particularly noteworthy since the Volunteers' experience was in a country that has had relatively little development in this sphere. We should probably also note that significant increase in worry over Colombian officials' support was almost impossible because the initial score approached the upper limit, although even so the trend of scores was in the direction of increase. As will be recalled, we discussed the special pertinence of such support for Volunteers in ETV earlier.

A Recapitulation of the Changes in Attitudes and Perceptions: We found significant changes ($p. < .05$, two-tailed) in attitudes and perceptions during service among the 22 utilization Volunteers on 12 of 48 items which had been selected to cover as full a range as possible of the topics to which Peace Corps service might be pertinent. In addition, we found near significant changes ($p. < .10$, two-tailed) on four of these items. The 12 items on which significant shifts occurred represented seven, or more than a third, of 16 different factors involving a recognizable attitudinal or perceptional dimension (the other five factors of the 21 extracted primarily involved demographic characteristics), and one of the 12 was unclassifiable by factor. The implication is that changes occurred in a number of different areas, and in a goodly proportion of the components into which attitudes and perceptions specially pertinent to Volunteer service can be divided. Of the 11 items encompassed by the seven factors, eight correlated strongly with their respective factors (near .70 loading or greater, as indicated by bracketing in Table 9:2) and three correlated fairly strongly (between .50 and about .70, as indicated by underlining in Table 9:2). The implication is that changes occurred on items fairly representative of the subsuming factor.

The significant changes were (all p.'s two-tailed): Factor I: "Belief in Latin Potential for Progress," increased belief in the potential of Colombia for a high standard of living ($p. < .01$) and for a high level of education ($p. < .05$); Factor IV: "Orientation Toward Foreign Culture," decreased evaluation of Peace Corps training ($p. < .001$) and downward revision in recall of initial expectation of number of Colombian friends that would be made ($p. < .01$), indicating (when taken in conjunction with other data) disappointment over quantity of friendships that developed; Factor VII: "Self-confidence in Leadership Capability," increased self-evaluations of organizing ability ($p. < .001$) and of leadership ability ($p. < .001$), broadly interpretable as gains in self-confidence; Factor IX: "Self-confidence in Capability of Contributing," increased worry over technical competence for the job ($p. < .001$), which in this context meant knowledge about teaching methods; Factor XI: "Belief in Effectiveness of Latin Governments," increased belief in the effectiveness of Latin American governments in general ($p. < .05$), although there was no significant shift in regard to Colombia's government; Factor XII: "Satisfaction With the Project," increased estimation of the ETV Project's overall effectiveness ($p. < .05$) and increased optimism over the likelihood of the project's eventual success ($p. < .05$); Factor XXI: "Desire to Re-Make Peace Corps and Project," increased desire for changes in the Peace Corps ($p. < .01$); and, among the unclassifiable items, increased belief in the benefits a big tourist industry brings to an underdeveloped nation ($p. < .01$), notable because Colombia provided the Volunteers with a first-hand example of a country relatively lacking in such activity.

The near-significant changes were (all p.'s $< .10$, two-tailed): Factor I, "Belief in Latin Potential for Progress," increased belief in potential of Latin America generally for a high standard of living; Factor IV: "Orientation Toward Foreign Culture," increased estimate of number of Colombian friends made since first few weeks of service, although the totality of data indicated that the actual total was disappointing; Factor V: "Concern With Material Well-Being," increased belief in benefits private U.S. investment can bring to an underdeveloped country; and Factor X: "Anxiety Over Achievement" and the unnamed Factor XV (the item loaded on both), increased satisfaction with own job performance (which bordered the criterion for significance with p. < .06, two-tailed).

In sum, the Volunteers increased their estimate of the potential of the country in which they served for social progress in regard to a high standard of living and level of education; grew more worried over their technical competence to advise teachers and more dissatisfied with their Peace Corps training, both reflecting problems encountered in fulfilling their utilization assignment; increased in desire for changes in the Peace Corps, emphasizing greater staff support overseas for Volunteers; increased in self-confidence, as indicated by increases in self-evaluations of organizing and leadership abilities; increased in their belief in the effectiveness of Latin American governments generally, but notably not in regard to Colombia's government; indicated they were disappointed in the number of Colombian friends they made, although they also indicated they did make some; expressed increased satisfaction with their project through increased estimates of its effectiveness and likely eventual success; and increased in their belief in the positive role a tourist industry can play in the economy of an underdeveloped country.

The data also indicated that it was very likely that they increased in their satisfaction with their job performance, despite their many problems, and that it was quite likely that they generalized their increased belief in Colombia's potential for a high standard of living to Latin America generally and increased their belief in the benefits of private U.S. investment to an underdeveloped country.

In short, the data indicated there were changes during service involving self, the project, the Peace Corps, the country of service, Latin America generally, and the possible role in development of such non-governmental activities as tourism and private U.S. investment.

We did not ask any questions directly on political or ideological orientation. However, we think it noteworthy that two of the significant or near-significant changes, on tourism and private investment abroad, were in the opposite direction to views often expressed by anti-U.S. groups abroad. These findings are consistent with the frequently-advanced view that Volunteer service increases disposition toward the pragmatic and practical and the seeking of social change through existing institutions.

Change of Another Kind: One kind of change not directly related to attitudes or perceptions that might be expected to occur during Peace Corps service is an increase in skills and competence. Of course, it is quite obvious that two years of daily practice is likely to increase skill or proficiency in whatever is practiced. The question, then, is not so much whether skills of some unnamed sort increased, but whether skills relevant to the Volunteer's future plans increased. We asked the Volunteers directly about this in the terminal questionnaire.

We asked, "Has your Peace Corps experience provided opportunities which you otherwise would not have had for developing skills and abilities?" Of the 22 utilization Volunteers whose perceptual and attitudinal changes during service have been discussed, 18, or about 82 per cent, said "Yes." In specifying skills, they named language (Spanish), teaching, administrative and organizing procedures and abilities, working effectively abroad, and working abroad in education.

We also asked, "Do you expect to use the skills and abilities you used in your Peace Corps job later on in your career?" Of these 22 utilization Volunteers, 20, or 91 per cent, said "Yes." In specifying how, they named teaching school, teaching language (Spanish), working in educational television abroad or in the U.S., and such general capabilities as "human relations."

These results coincide with our own impressions. The same preponderance of positive replies also was given by the Volunteers excluded from the change analysis. We can thus add another kind of change to our previous list: from the Volunteers' perspective, there was an increase during Peace Corps service in skills and abilities which the Volunteers felt would help them in their later careers.

Part III: Some Findings on Shifts in Volunteer Perceptions During the First and Last Months of Service Overseas

When the large contingent of replacement ETV Volunteers arrived in mid-1965, we were given an opportunity to study further Volunteer adjustment overseas. The situation was rather unusual since the utilization component of the replacement Volunteers would overlap by several months the original utilization Volunteers. We decided to take advantage of this circumstance by using a procedure that would allow us to study the two groups jointly.

What we did was measure the perceptions of both groups of Volunteers regarding a wide variety of things relevant to their service at the two points in time demarcating their common period of activity. The first measurement took place when the replacement Volunteers arrived. The second measurement took place when the original Volunteers departed. About three months intervened. The resulting data cast light on changes in Volunteer outlook during the first months of service and also on changes during the last months of service.

Since both sets of utilization Volunteers were serving in the same kind of job in the same project in the same country over the same period of time, the procedure permits each to serve as a standard for judging the import of changes in the other. Of course, the data on the replacement Volunteers are of particular interest, because they reflect the effects of actual experience on impressions inculcated during the Volunteers' preparatory Peace Corps training. Their data also are of particular interest because the replacement Volunteers, unlike the original ETV Volunteers, entered an on-going, relatively well-organized project operating on a backlog of experience and these Volunteers can be looked upon as more typical of ETV Volunteers and Volunteers generally. As a result, while the data on both sets of Volunteers have intrinsic descriptive interest, the data on the replacement Volunteers have implications for training and field operations during the first few months of service in the large project.

Data-Gathering and Analysis

The measurement device used was Osgood's "semantic differential." This was chosen because it suited perfectly our need for a device that would measure the connotative meaning of a number of things simply, reliably, and in a standard way both for all things assessed and all persons doing the assessing. In the semantic differential, respondents are asked to rate concepts on a variety of seven-point scales each defined by opposed adjectives. The concept is the thing whose meaning is being measured. For example, "Peace Corps" might be a concept to be measured, and the scales might include "bad" vs. "good" or "disorganized" vs. "organized." For each concept, the respondent places a mark on the seven-point scale between each pair of adjectives to indicate how apropo he considers one or the other; if he thinks neither applies more than the other, he marks the mid-point; the more strongly he feels one rather than the other applies, the nearer to that end of the scale does he place his mark. The results are scored one to seven on each scale. The data reflect the connotative meaning or impressions held of the concepts in regard to the scales, or adjective pairs, used. The number and content of the adjective pairs in any particular application of the semantic differential are arbitrary, although there is benefit in using those involved in past investigations during the technique's development since their factor analysis has suggested three broader dimensions by which they can be grouped -- "evaluative," "potency," and "activity." We have used such a classification because it helps isolate those scales particularly relevant to valuational judgments.[6]

We chose 16 concepts to represent the Volunteers' experiential world. They are, of course, an arbitrary sampling of a much larger number of possible concepts. However, we chose these particular 16 because we found them at the center of a great deal of Volunteer thought and conversation, and we think they represent the most important elements of the environment peculiar to ETV Volunteers.

Seven represent aspects of Colombia and Colombian education:

COLOMBIAN GOVERNMENT
COLOMBIAN RELIABILITY
COLOMBIAN INTEREST IN EDUCATION
COLOMBIAN EDUCATIONAL METHODS
COLOMBIAN CLASSROOMS
TELEVISION TEACHER
CLASSROOM TEACHER

The latter two are included in this category because in the context of the ETV Project they referred to Colombian aspects of the project. The "television teacher" in the project was always a Colombian, and the "classroom teacher" referred to the school teachers expected to use the televised instruction in their own teaching.

Five represent aspects of the Peace Corps:

PEACE CORPS
PEACE CORPS STAFF
PEACE CORPS ETV PROJECT
PEACE CORPS ETV SHOWS
PEACE CORPS VOLUNTEER LIVING ALLOWANCE

Two represent aspects of the Volunteer personally:

PEACE CORPS VOLUNTEER
MYSELF

Two represent aspects of education generally:

TEACHING SCHOOL
INSTRUCTIONAL TV IN SCHOOLS

For the adjective pairs, we chose a set of 21 previously used with success by other investigators in studying high school pupils' reactions to a televised mathematics course.[7] This battery had the rather broad applicability to a varied range of concepts that we desired and included at least five pairs or scales that had been found generally to fall in each of the three factors or dimensions in other applications of the semantic differential.

The "evaluative" scales were:

uninteresting - interesting
inexpert - expert
foolish - wise
bad - good
cruel - kind
meaningless - meaningful
useless - useful

The "potency" scales were:

small - large
soft - hard
weak - strong
shallow - deep
dull - sharp

The "activity" scales were:

passive - active
slow - fast
simple - complex
calming - exciting
relaxed - tense

In addition, there were four others of special interest when a new undertaking is being assessed:

disorganized - organized
old - new
difficult - easy
frightening - reassuring

These are presented here in the order in which they were scored. For example, the scores ran from one to seven for "uninteresting" vs. "interesting." However, in the instruments themselves they were randomized as to direction and as to order for each administration with the battery kept intact as to arrangement for all the concepts within any one administration (for the instructions and a sample rating sheet for a concept, see Appendix B).

Data were obtained from 20 original utilization Volunteers and 19 replacement utilization Volunteers. The replacement Volunteers made their first ratings within a few days of their arrival in Colombia before they had been sent to their sites or otherwise become actively involved in the project. The original Volunteers made their first ratings during the preceding two weeks. The original Volunteers made their second ratings either at a termination meeting a day before their term of service was to end or during the preceding two weeks. The replacement Volunteers made their second ratings during the same period. As we have said, the intervening time was about three months.

We have analyzed the results separately for each set of Volunteers, assessing the significance of changes on every scale for each concept by t-test. In some cases, the number of respondents involved in a comparison is less than the total group by one or two because some Volunteers did not choose to rate all of the concepts; as a result, a separate N will be shown for each comparison.

The quantity of data is large: 336 measurements (16 concepts x 21 scales) on each group at two points in time, for a total of 1,334 measurements (two groups x two points in time x 336). Obviously, the number of possible comparisons is immense. However, the situation becomes manageable when our interests and the nature of the data are considered.

We are interested in only two kinds of comparisons -- between groups, and within groups over time (changes). Moreover, the nature of the data precludes attaching meaning to every measurement individually. There are two reasons for this. First few of the scales have an obvious relevance or import when taken alone (although there are exceptions). Second, when a large number of measurements are relatively indiscriminable as to importance a certain number of significant differences can be expected to appear by chance (the expected proportion is indicated by the criterion for significance applied; thus, if $p. < .05$ were the criterion five per cent of the comparisons would be expected to be significant by chance. The consequence is that data of this sort have meaning primarily in their general trend. Thus, we will confine ourselves only to certain comparisons, and to interpreting the data in broad terms.

We will concentrate on changes within the groups, although we will make some comparisons between them. When we deal with the latter we will make rather gross, descriptive comparisons since these will serve the purpose completely. We will not include an analysis of the significance of net shifts between the two groups on the various scales as this would only clutter the presentation to no purpose.

The Results

The complete semantic differential results for both groups of Volunteers on all 16 concepts appear in Table 9:3. Later, as we present our findings, we will highlight the principal results. However, it is desirable to review briefly the format of this omnibus table. The reader will find that he will be able to follow our presentation with much greater understanding if he first at least scans the data en toto, for these data are the basic source.

In Table 9:3, the concept whose connotative meaning for the Volunteers was measured (such as "Colombian Government") appears at the top of each page. The 21 scales are arranged in the same order for each concept along the extreme left. The scales are expressed in accord with the direction of scoring; thus, "uninteresting-interesting," the first scale listed, indicates that the minimum score (1) was given to responses at the extreme of "uninteresting" and the maximum score (7) to those at the extreme of "interesting" on the intervening seven-point scale. All of the scales have been scored so that higher scores indicate more positive ratings.

The data for the original Volunteers appears on the left half of each page, and the data for the replacement Volunteers on the right half. For each group, the following are shown: the mean of the first scores, the mean of the second scores, the difference between the two means (with the first mean always subtracted from the second mean, so that a minus sign indicates a negative shift for the group), the t resulting from the statistical assessment (by t-test) of the significance of changes, and the level of significance achieved. The level of significance is indicated by asterisk: a single asterisk(*) denotes a change significant at

Table 9:3: Ratings of Sixteen Concepts on the Semantic Differential by Original ETV Utilization Volunteers at the Beginning and End of the Last Three Months of Service, and by Replacement ETV Utilization Volunteers at the Beginning and End of the First Three Months of Service

The following 16 pages comprise the table. The data for both sets of Volunteers are shown for one concept on each page. The concept appears at the top. The scales are indicated at the extreme left with each adjective pair in the order of scoring. Thus, "uninteresting-interesting" indicates that scores of one to seven were assigned so that seven would represent a rating at the extreme of "interesting." All the scales are scored so that the higher scores represent the more positive values. For convenience, the scales are arranged by dimension -- "evaluative," "potency," "activity," with the four unclassified scales at the bottom. On each page, the data for the original Volunteers appears on the left half and the data for the replacement Volunteers on the right half. For each group of Volunteers the following is shown: the first mean rating, the second mean rating, the difference (with the first mean always subtracted from the second, so that a minus sign indicates a negative change in ratings), the *t* resulting from application of a *t-test* to the change, and the statistical significance, if any, of the change. The latter is indicated by asterisks following the *t*: a single asterisk (*) indicates $p. < .05$, and a double asterisk(**) indicates $p. < .01$, both two-tailed. Data were obtained from 20 original utilization Volunteers and 19 replacement utilization Volunteers. However, since some Volunteers declined to rate some of the concepts a separate N is shown for each set of ratings of a concept to indicate the number of respondents involved.

Table 9:3 (continued)

COLOMBIAN GOVERNMENT

Scales	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	3.7895	4.1579	.3684	.8624	3.3333	2.3333	-1.0000	.8086
inexpert - expert	1.9474	2.2105	.2632	.8932	4.8889	3.0556	-1.8333	1.5597
foolish - wise	2.9474	2.1579	-.7895	2.9108**	4.1667	2.8889	-1.2778	4.2538**
bad - good	3.1579	2.4211	-.7368	3.2404**	4.5000	3.7222	-.7778	2.5217*
cruel - kind	3.6316	2.4737	-1.1579	3.8757**	4.3889	3.3333	-1.0556	3.2170**
meaningless - meaningful	3.0000	3.0526	.0526	.1391	5.3889	4.6667	-.7222	1.3985
useless - useful	3.6316	2.8421	-.7895	2.0412	5.5556	3.9444	-1.6111	4.3344**
POTENCY								
small - large	5.0526	4.9474	-.1053	.2127	5.3333	5.2222	-.1111	.3082
soft - hard	2.7368	2.9474	.2105	.4823	4.4444	3.5000	-.9444	2.8784*
weak - strong	1.5789	1.8947	.3158	1.3725	3.3333	2.3333	-1.0000	2.2969*
shallow - deep	2.5263	2.5789	.0526	.1696	4.8889	3.0556	-1.8333	3.8195**
dull - sharp	2.5789	2.4737	-.1053	.3086	4.5000	3.5556	-.9444	2.6474*
ACTIVITY								
passive - active	2.6316	2.0000	-.6316	2.0513	4.3889	2.5000	-1.8889	4.1374**
slow - fast	1.5789	2.2105	.6316	2.5846*	3.0000	2.3333	-.6667	2.2039*
simple - complex	5.3684	4.4211	-.9474	2.1740*	6.1667	5.9444	-.2222	.6216
calming - exciting	4.2105	4.6315	.4210	.6356	5.3889	4.3889	-1.0000	2.1354*
relaxed - tense	4.9474	4.5789	-.3684	.9410	5.0000	4.7222	-.2778	.5909
OTHER								
disorganized - organized	2.0000	2.0000	.0000	------	4.1667	2.5556	-1.6111	4.4407**
old - new	2.4737	2.0000	-.4737	1.2814	3.6667	3.1111	-.5556	1.3683
difficult - easy	3.1579	3.0000	-.1579	.3176	2.8333	2.6111	-.2222	.7205
frightening - reassuring	2.6842	2.0526	-.6316	2.3635*	3.3333	2.7778	-.5556	1.3420
	N = 19				N = 13			

*p. < .05, two-tailed. ** p. < .01, two-tailed.

Table 9:3 (continued)

COLOMBIAN RELIABILITY

Scales	ORIGINAL VOLUNTEERS First Mean	Second Mean	Difference	t.	REPLACEMENT VOLUNTEERS First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	3.9444	3.7778	-.1667	.4275	5.1765	4.6471	-.5294	1.2841
inexpert - expert	3.3333	3.3333	.0000	1.1974	3.3529	3.7059	.3529	1.1442
foolish - wise	3.3333	3.1111	-.2222	.7466	3.9412	3.8824	-.0588	.2025
bad - good	3.2222	3.1667	-.0556	.1599	4.2941	3.8824	-.4118	.9790
cruel - kind	3.5000	3.7222	.2222	.5547	4.6471	4.0000	-.6471	2.2813*
meaningless - meaningful	3.8889	3.9444	.0556	.1599	5.0588	5.0588	.0000	------
useless - useful	3.8333	3.6667	-.1667	.3949	4.8824	4.5294	-.3529	.7930
POTENCY								
small - large	3.0000	3.2222	.2222	.7205	4.2353	3.5294	-.7059	1.4167
soft - hard	3.1667	3.4444	.2778	.8143	3.7647	3.5294	-.2353	.6554
weak - strong	2.94444	3.0000	.3475	.1599	3.5882	3.1765	-.4118	1.0464
shallow - deep	3.3333	3.3333	.0000	------	3.5294	3.4118	-.1176	.3556
dull - sharp	3.5000	3.0556	-.4444	1.4577	4.0588	3.8235	-.2353	1.0000
ACTIVITY								
passive - active	3.1667	2.7222	-.4444	1.8103	3.7647	3.1176	-.6471	1.5422
slow - fast	3.1667	3.0000	-.1667	.4186	3.1765	2.4706	-.7059	1.9531
simple - complex	3.9444	3.8889	-.0556	.1519	5.0588	4.5882	-.4706	1.1669
calming - exciting	4.2222	3.5000	-.7222	1.3985	4.000	4.2353	.2353	.6963
relaxed - tense	3.3889	3.3889	.0000	------	3.4706	3.3529	-.1176	.2229
OTHER								
disorganized - organized	2.7222	2.5556	-.1667	.4964	3.8824	2.8824	-1.0000	3.5162**
old - new	3.0556	3.4444	.3888	.7893	3.7059	3.9412	.2353	.5781
difficult - easy	3.5556	3.1111	-.4444	1.3649	3.5882	3.2941	-.2941	.5372
frightening - reassuring	3.1111	2.7778	-.3333	.9459	3.7059	3.6471	-.0588	.1516
	N=18				N=17			

*p<.05, two-tailed

**p<.01, two-tailed

Table 9:3 (continued)

COLOMBIAN INTEREST IN EDUCATION

Scales	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	4.1000	4.3500	.2500	.5674	5.1176	4.3529	-.7647	2.0717
inexpert - expert	2.4000	3.1000	.7000	3.1986**	4.1765	3.9412	-.2353	1.1856
foolish - wise	3.4000	3.8500	.4500	1.2538	4.3529	4.1765	-.1765	.4466
bad - good	3.8000	4.2500	.4500	1.1834	5.4118	4.4706	-.9412	1.8175
cruel - kind	4.3500	4.0000	-.3500	1.5051	4.6471	4.0000	-.6471	2.0976
meaningless - meaningful	3.9000	4.5500	.6500	1.8571	6.0000	4.5882	-1.4118	3.5877**
useless - useful	3.8500	4.7000	.8500	1.8938	5.4118	5.0588	-.3529	1.0000
POTENCY								
small - large	3.5000	3.1000	-.4000	.8094	5.3529	3.8824	-1.4706	3.2342**
soft - hard	3.1000	3.7500	.6500	1.7156	4.2353	3.5882	-.6471	2.2813*
weak - strong	2.6000	3.0000	.4000	.9686	4.6471	3.2941	-1.3529	2.9849*
shallow - deep	2.9500	3.6500	.7000	1.5841	4.1765	3.9412	-.2353	.4670
dull - sharp	3.5000	3.1500	-.3500	1.3241	4.0000	3.8235	-.1765	.5455
ACTIVITY								
passive - active	2.6500	2.8500	.2000	.3801	5.1176	3.1765	-1.9412	3.4737**
slow - fast	2.2500	2.7500	.5000	1.3388	3.0588	2.3592	-.7059	2.1423*
simple - complex	3.7000	4.0500	.3500	.7170	4.2941	3.6471	-.6471	2.2813*
calming - exciting	4.6000	5.5500	.9500	3.3953**	4.7059	4.5882	-.1177	.2559
relaxed - tense	4.1000	3.7000	-.4000	1.5062	4.1765	3.0588	-1.1176	2.7863*
OTHER								
disorganized - organized	2.4000	2.7000	.3000	.7801	3.7647	3.0000	-.7647	1.8788
old - new	4.2000	4.1000	-.1000	.1552	4.3529	3.8824	-.4706	.8775
difficult - easy	3.5500	3.3000	-.2500	.7053	3.45706	3.2353	-.2353	.6209
frightening - reassuring	3.7500	3.7500	.0000	------	4.3529	4.2353	.1176	.3157
	N = 20				N = 17			

*p. < .05, two-tailed
**p. < .01, two-tailed

Table 9:3 (continued). COLOMBIAN EDUCATIONAL METHODS

Scales	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	2.3000	2.9500	.6500	1.7479	5.0526	3.6316	-1.4211	2.8235*
inexpert - expert	2.4000	2.6000	.2000	.9401	2.8947	2.8421	-.0526	.1452
foolish - wise	3.3000	2.6500	-.6500	2.2924*	4.1053	3.2632	-.8421	2.7306*
bad - good	2.7500	2.6500	-.1000	.3838	4.0000	3.3684	-.6316	1.9354
cruel - kind	3.6000	3.4500	-.1500	.4709	4.3684	3.6316	-.7368	3.6836**
meaningless - meaningful	3.4500	3.3500	-.1000	.3171	4.7895	4.0000	-.7895	2.3951*
useless - useful	4.0500	3.6000	-.4500	1.5768	5.3684	3.7895	-1.5789	4.1036**
POTENCY								
small - large	3.1000	3.2000	.1000	.3258	4.2105	3.5789	-.6316	1.6132
soft - hard	3.5500	3.4000	-.1500	.3342	4.5263	3.8947	-.6316	1.0000
weak - strong	2.5500	2.6000	.0500	.1365	3.4737	3.3158	-.1579	4.8190**
shallow - deep	2.3500	2.7000	.3500	1.7887	4.1579	3.1579	-1.0000	.1900
dull - sharp	2.5500	2.5000	-.0500	.2367	3.9474	2.4211	-1.5263	1.7876
ACTIVITY								
passive - active	2.8500	2.5500	-.3000	1.1013	3.8421	2.7895	-1.0526	2.4155*
slow - fast	2.1500	2.8500	.7000	2.6659*	2.4737	2.7895	.3158	1.0000
simple - complex	3.1500	2.9500	-.2000	.3954	4.8421	3.0526	-1.7895	4.8190**
calming - exciting	3.1500	3.6000	.4500	1.1349	4.0526	4.1049	.1023	.1900
relazed - tense	4.6000	3.7500	-.8500	2.0624	4.4211	3.7368	-.6842	1.7876
OTHER								
disorganized - organized	2.7000	2.8500	.1500	.5125	4.3158	3.4737	-.8421	2.0714
old - new	2.0500	2.3000	.2500	.6909	2.2632	2.5789	.3158	.9000
difficult - easy	3.5000	3.7500	.2500	.5921	3.5263	3.8947	.3684	.8237
frightening - reassuring	2.7000	3.1000	.4000	1.4530	3.6316	3.3158	-.3158	.8601
	N = 20				N = 19			

* p. < .05, two-tailed
** p. < .01, two-tailed

Table 9:3 (continued)

COLOMBIAN CLASSROOMS

Scales	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	2.5789	3.3158	.7368	1.9733	4.7895	4.0526	-.7368	1.7350
inexpert - expert	2.4211	3.1579	.7368	.4615	2.7368	2.7895	.0526	.1421
foolish - wise	3.0000	3.1579	.1579	.4831	4.3158	3.6842	-.6316	2.7213*
bad - good	2.5263	2.7895	.2632	1.0000	4.4737	4.1579	-.3158	.8794
cruel - kind	3.4211	3.4737	.0526	.1646	4.4737	3.4211	-1.0526	2.9036**
meaningless - meaningful	3.1579	3.6842	.5263	1.4237	5.1579	4.5263	-.6316	1.6132
useless - useful	3.4211	4.3158	.8947	2.1399*	5.3158	5.1053	-.2105	.6761
POTENCY								
small - large	2.1579	2.5263	.3684	1.0717	3.9474	3.7895	-.1579	.3338
soft - hard	4.2632	4.0000	-.2632	.7200	4.6316	3.6316	-1.0000	2.3486*
weak - strong	2.8947	2.8947	.0000	------	3.6842	3.2105	-.4737	1.3400
shallow - deep	2.4211	3.1579	.7368	2.5011*	4.0526	3.3158	-.7368	2.4208*
dull - sharp	2.8947	2.5263	-.3684	1.1613	3.9474	3.2105	-.7368	2.4208*
ACTIVITY								
passive - active	2.6316	2.7368	.1053	.3693	3.2632	3.7368	.4737	1.3725
slow - fast	2.5263	2.5789	.0526	.1750	2.6842	2.8947	.2105	.7762
simple - complex	3.3684	3.2632	-.1053	.1911	4.7368	3.4211	-1.3158	3.2486**
calming - exciting	3.3158	3.3158	.0000	------	4.7368	3.3158	-.4210	.8447
relaxed - tense	4.5263	3.7368	-.7895	1.8669	4.2632	4.1579	-.1053	.2152
OTHER								
disorganized - organized	2.6316	2.5789	-.0526	.1601	4.0526	2.7895	-1.2632	4.8000**
old - new	1.8421	1.9474	.1053	.3991	2.6842	2.3684	-.3158	.9000
difficult - easy	3.8421	3.3684	-.4737	1.4863	3.2632	3.0526	-.2105	.4615
frightening - reassuring	3.1053	3.1579	.0526	.1485	3.7895	3.7368	-.0526	.1601
	N = 19				N = 19			

* p. < .05, two-tailed
**p. < .01, two-tailed

Table 9:3 (continued)

TELEVISION TEACHER

Scales	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	6.1000	5.1500	-.9500	4.0460**	6.4211	5.5263	-.8947	4.8190**
inexpert - expert	4.9500	4.5000	-.4500	3.0177**	6.0526	5.0526	-1.0000	3.1716**
foolish - wise	5.3000	4.9000	-.4000	1.4530	5.7368	5.1579	-.5789	3.6442**
bad - good	5.8500	5.2500	-.6000	1.9827	6.4211	5.6842	-.7368	2.9263*
cruel - kind	5.3500	4.7500	-.6000	2.2593*	5.4737	4.9474	-.5263	2.0412
meaningless - meaningful	6.2000	5.3500	-.8500	2.9978**	6.6842	5.7368	-.9474	4.8690**
useless - useful	6.3000	5.9000	-.4000	2.1794*	6.8421	6.1053	-.7368	5.7155**
POTENCY								
small - large	4.1500	4.3500	.2000	.6074	4.6842	4.0526	-.6316	2.2723*
soft - hard	4.6500	4.3500	-.3000	1.0000	4.9474	3.8421	-1.1053	4.5947**
weak - strong	5.4500	4.9500	-.5000	1.3924	6.0000	4.8421	-1.1579	4.0092**
shallow - deep	4.9500	4.5000	-.4500	1.5768	5.2632	4.5263	-.7368	2.6888*
dull - sharp	5.6000	4.8500	-.7500	2.5947*	5.9474	4.8421	-1.1053	3.6252**
ACTIVITY								
passive - active	6.0000	5.2500	-.7500	3.0000**	6.1579	5.4737	-.6842	2.6913*
slow - fast	5.4000	4.5000	-.9000	3.0177**	4.8421	3.7895	-1.0526	3.6181**
simple - complex	4.8000	4.4500	-.3500	1.2769	5.4211	4.6316	-.7895	3.0339**
calming - exciting	5.0000	4.9500	.0500	1.2693	5.6316	4.4737	-1.1579	2.1222*
relaxed - tense	4.0000	3.7500	-.2500	.7081	5.9474	4.8421	-1.1053	.9872
OTHER								
disorganized - organized	5.6500	4.7000	-.9500	2.0583	6.1579	4.8947	-1.2632	4.4397**
old - new	5.7000	5.1000	-.6000	1.7097	5.0000	4.3684	-.6316	1.6785
difficult - easy	4.0000	3.7500	-.2500	.6647	2.9474	3.5263	.5789	1.7226
frightening - reassuring	5.8500	4.5000	-1.3500	4.4771**	5.7368	4.6842	-1.0526	3.6181**
	N = 20				N = 19			

*p. < .05, two-tailed

**p. < .01, two-tailed

Table 9:3 (continued)

CLASSROOM TEACHER

	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
Scales	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	3.6842	4.3158	.6316	2.0513	5.2222	4.7778	-.4444	1.0348
inexpert - expert	2.8421	3.4211	.5790	2.0747	3.5000	3.8889	.3889	.8115
foolish - wise	3.7368	3.8947	.1579	.6152	4.7222	4.3889	-.3333	1.0000
bad - good	4.6842	4.4737	-.2105	.7210	5.3889	4.7222	-.6667	1.7995
cruel - kind	4.5263	4.4737	-.0526	.2942	5.1667	4.3889	-.7778	1.9415
meaningless - meaningful	4.7368	4.8947	.1579	.4108	6.0000	5.2778	-.7222	1.9131
useless - useful	5.1053	5.1579	.0526	.1521	6.0000	5.2222	-.7778	2.5217*
POTENCY								
small - large	4.5789	3.9474	-.6316	2.0513	4.0556	4.0556	.0000	------
soft - hard	3.7368	3.7368	.0000	------	4.1667	3.7222	-.4444	1.4577
weak - strong	3.4211	3.7895	.3684	1.0223	4.0556	4.0556	.0000	------
shallow - deep	3.2632	3.8421	.5789	1.9345	4.5000	4.1667	-.3333	.9459
dull - sharp	3.8421	3.6316	-.2105	.8464	4.6111	3.6667	-.9444	2.3147*
ACTIVITY								
passive - active	4.2105	3.7895	-.4211	1.0347	4.3333	4.0556	-.2778	.6764
slow - fast	2.8947	3.4211	.5263	1.9570	3.2778	3.1111	-.1667	.4024
simple - complex	3.3684	3.8947	.5263	1.2922	5.0000	4.3333	-.6667	1.6833
calming - exciting	3.6842	4.2632	.5790	1.0657	4.8888	4.4444	-.4444	.9490
relaxed - tense	4.0000	4.0526	.0526	.2236	3.7778	3.5556	-.2222	.6381
OTHER								
disorganized - organized	3.4737	3.7368	.2631	.9249	5.0556	4.0556	-1.0000	3.0923**
old - new	3.4211	3.5263	.1053	.4376	3.6111	3.3889	-.2222	.7205
difficult - easy	3.8947	3.5263	-.3684	.9791	3.2222	3.2222	.0000	------
frightening - reassuring	4.1579	3.7895	-3.684	1.0992	4.5556	4.1667	-.3789	.7689
	N = 19				N = 18			

*p. < .05, two-tailed
** p. < .01, two-tailed

Table 9:3 (continued)

PEACE CORPS

Scales	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	6.7368	5.7368	-1.0000	4.9425**	6.7895	6.4211	-.3684	1.9332
inexpert - expert	3.7895	4.5789	.7895	1.9658	5.6316	5.6316	.0000	------
foolish - wise	5.7368	5.0526	-.6842	2.9737**	6.3158	5.6842	-.6316	3.6181**
bad - good	6.3158	5.6316	-.6842	2.3868*	6.7368	6.4737	-.2632	1.5639
cruel - kind	5.3158	5.0000	-.3158	1.0000	5.0526	5.5789	.5263	1.3156
meaningless - meaningful	6.5789	5.9474	-.6319	4.0249**	6.8421	6.4737	-.3684	2.1106*
useless - useful	6.2105	5.7368	-.4737	1.8371	6.6316	6.5789	-.0526	.5669
POTENCY								
small - large	5.4211	5.4737	.0526	.1560	6.3684	5.7368	-.6316	1.5026
soft - hard	4.7368	4.5789	-.1579	.8250	5.6842	4.4737	-1.2105	2.9106**
weak - strong	5.4737	5.2105	-.2632	.8932	6.3684	6.1579	-.2105	1.1655
shallow - deep	5.0000	5.3158	.3158	.8250	5.9474	5.7895	-.1579	.6784
dull - sharp	5.1579	5.1579	.0000	------	6.0526	5.5789	-.4737	1.6941
ACTIVITY								
passive - active	6.2105	5.7895	-.4211	1.5689	6.6842	6.4737	-.2105	1.2865
slow - fast	4.1053	4.3684	.2632	.6196	4.7895	4.0000	.7895	1.2466
simple - complex	4.8947	5.4737	.5789	1.8193	6.0000	6.0526	.0526	.2705
calming - exciting	5.5263	5.6842	.1579	.4252	6.4211	5.9474	-.4737	1.5885
relaxed - tense	4.6842	4.1579	-.5263	1.4237	4.8421	4.1053	-.7368	2.0617
OTHER								
disorganized - organized	4.2105	4.0000	-.2105	.5443	6.1053	5.4737	-.6316	2.8823**
old - new	5.2632	5.3684	.1053	.3086	5.5789	5.0526	-.5263	1.3942
difficult - easy	2.7895	3.0000	.2105	.5926	2.1579	2.8947	.7368	1.7350
frightening - reassuring	4.4211	4.7368	.3158	1.0307	4.9474	5.4211	.4737	1.8371
	N = 19				N = 19			

*p. < .05, two-tailed.
**p. < .01, two-tailed.

Table 9:3 (continued)

PEACE CORPS STAFF

	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
Scales	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	4.6842	4.7368	.0526	.2127	6.3333	5.9444	-.3889	1.1974
inexpert - expert	4.2105	4.8947	.6842	2.1058*	6.2778	5.6111	-.6667	2.4863*
foolish - wise	4.3158	4.5263	.2105	.7762	5.8333	5.1111	-.7222	2.4043*
bad - good	4.8421	5.2105	.3684	1.5875	6.1111	5.5556	-.5556	3.0071**
cruel - kind	4.7368	4.5789	-.1579	.7183	5.5000	5.0556	-.4444	1.8103
meaningless - meaningful	4.8421	4.6842	-.1579	.6098	6.3333	5.8889	-.4444	2.6754*
useless - useful	4.9474	5.1053	.1579	.4108	6.5556	5.7222	-.8333	3.2196**
POTENCY								
small - large	4.5263	3.9474	-.5789	1.5679	5.8889	4.8333	-1.0556	3.4321**
soft - hard	4.4737	4.3158	-.1579	.4587	5.5000	4.2778	-1.2222	4.6532**
weak - strong	4.0526	4.3684	.3158	.9222	5.2778	4.5000	-.7778	3.5000**
shallow - deep	4.1579	4.3684	.2105	.5794	5.6111	4.6111	-1.0000	3.0000**
dull - sharp	4.8421	4.6842	-.1579	.5669	5.8333	5.0556	-.7778	2.6130*
ACTIVITY								
passive - active	4.7895	4.7368	-.0526	.1646	6.3333	5.8333	-.5000	1.5837
slow - fast	4.0000	4.1053	.1053	.2561	5.1667	4.3889	-.7778	1.6608
simple - complex	4.7368	5.0000	.2632	.6642	5.5556	5.7222	.1667	.5890
calming - exciting	4.1579	4.4737	.3158	.7917	5.2778	4.2778	-1.0000	2.4155*
relaxed - tense	4.3158	4.4737	.1579	.4281	4.1111	4.8889	.7778	2.1755*
OTHER								
disorganized - organized	4.2105	4.6842	.4737	1.4863	6.3333	5.2778	-1.0556	3.4321**
old - new	4.1053	4.3684	.2632	.8385	4.7222	4.3889	-.3333	.8997
difficult - easy	4.0000	3.7368	-.2632	.6196	3.5000	3.3889	-.1111	.2007
frightening - reassuring	4.4737	4.5789	.1053	.2877	5.6111	5.3333	-.2778	1.1579
	N = 19				N = 18			

*p. < .05, two-tailed.
**p. < .01, two-tailed.

Table 9:3 (continued)

Scales	ORIGINAL VOLUNTEERS First Mean	Second Mean	Difference	t.	REPLACEMENT VOLUNTEERS First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	6.1500	5.8500	-.3000	1.1013	6.5882	5.8235	-.7647	1.8385
inexpert - expert	4.7000	4.6000	-.1000	.2521	5.2353	5.7059	.4706	2.0570
foolish - wise	5.0500	5.1000	.0500	.1649	6.1765	6.0588	-.1176	.4603
bad - good	5.8000	5.8000	.0000	------	6.7059	6.1765	-.5294	2.4962*
cruel - kind	4.6500	4.2500	-.4000	2.6285*	5.5294	5.0000	-.5294	1.4922
meaningless - meaningful	6.3000	5.9500	-.3500	2.6659*	6.8235	6.3529	-.4706	1.8175
useless - useful	6.2500	5.9000	-.3500	1.3770	6.4118	6.4118	.0000	------
POTENCY								
small - large	5.4500	5.4000	-.0500	.1562	5.8824	6.0000	.1176	.3443
soft - hard	5.5000	4.6000	-.9000	2.9322**	5.4118	4.5882	-.8235	1.8403
weak - strong	5.4500	4.5500	-.9000	2.3486*	5.8235	5.2941	-.5294	2.1669*
shallow - deep	5.0000	4.8500	-.1500	.4113	5.7647	5.3529	-.4118	1.3288
dull - sharp	5.6000	4.8500	-.7500	2.6805*	5.7059	4.9412	-.7647	2.0717
ACTIVITY								
passive - active	5.9500	5.3500	-.6000	1.7474	6.0000	6.0000	.0000	------
slow - fast	4.4500	4.2000	-.2500	.6305	4.4706	3.5294	-.9412	2.7905*
simple - complex	5.9000	5.7500	-.2741	.5472	5.8824	5.3529	-.5294	1.1250
calming - exciting	5.1000	5.4000	.3000	.7614	5.8235	5.6471	-.1764	.4278
relaxed - tense	5.4000	4.9500	-.4500	1.3708	4.4706	3.7647	-.7059	1.4167
OTHER								
disorganized - organized	4.6500	4.2500	-.4000	1.1398	6.2941	5.4706	-.8235	2.7456*
old - new	6.1500	5.6500	-.5000	1.3648	5.7059	5.5882	-.1176	.3682
difficult - easy	2.4500	2.3000	-.1500	.6789	2.4706	3.0000	.5294	1.1068
frightening - reassuring	4.6000	4.1500	-.4500	1.1056	4.2941	4.7647	.4211	1.1175
	N = 20				N = 17			

* p. < .05, two-tailed.
** p. < .01, two-tailed

Table 9:3 (continued)

PEACE CORPS ETV SHOWS

Scales	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
	First Mean	Second Mean	Differ-ence	t.	First Mean	Second Mean	Differ-ence	t.
EVALUATION								
uninteresting - interesting	5.7368	5.2632	-.4737	1.4453	6.0526	5.4211	-.6316	2.4667*
inexpert - expert	4.5789	4.6316	.0526	.4969	5.0526	4.6842	-.3684	2.0498
foolish - wise	4.9474	5.2632	.3158	.9461	5.7895	5.5263	-.2632	1.2288
bad - good	5.5263	5.2632	-.2632	.6299	6.4211	5.6316	-.7895	2.3951*
cruel - kind	4.9474	4.5263	-.4211	1.8040	4.6316	4.5263	-.1053	.3567
meaningless - meaningful	6.1579	5.7368	-.4211	1.7143	6.5263	6.3158	-.2105	1.0733
useless - useful	6.1579	5.7895	-.3684	1.1613	6.7368	6.5789	-.1579	1.0000
POTENCY								
small - large	4.5263	4.6316	.1053	.2942	4.9474	4.5263	-.4211	.9265
soft - hard	4.2632	4.2105	-.0526	.2518	4.7368	4.2632	-.4737	1.4453
weak - strong	4.8421	4.7895	-.0526	.1949	5.3684	4.8947	-.4737	1.6341
shallow - deep	4.5789	4.6316	.0526	.1646	5.0526	4.6842	-.3684	1.1966
dull - sharp	4.8947	4.8947	.0000	------	5.4737	4.6842	-.7895	2.0824
ACTIVITY								
passive - active	5.4211	5.1053	-.3158	1.1895	5.7895	4.8947	-.8947	2.3450*
slow - fast	4.1579	4.4211	.2632	.8385	4.9474	4.0526	-.8947	2.5005*
simple - complex	4.3158	4.6842	.3684	1.2353	4.6316	4.7368	.1053	.2330
calming - exciting	4.7368	5.1579	.4211	1.1509	5.0000	4.8947	-.1053	.3168
relaxed - tense	4.1053	4.1053	.0000	------	3.7895	4.3158	.5263	1.2922
OTHER								
disorganized - organized	5.1053	4.9474	-.1579	.4587	5.8947	5.2632	-.6316	2.1909*
old - new	5.5263	5.3158	-.2105	.7471	5.6316	4.8947	-.7368	2.2811*
difficult - easy	3.6316	3.4737	-.1579	.4108	3.5263	3.5263	.0000	------
frightening - reassuring	5.0526	4.4737	-.5789	1.8193	5.0000	4.5263	-.4737	1.2063
	N = 19				N = 19			

*p. < .05, two-tailed.

**p. < .01, two-tailed.

Table 9:3 (continued)

VOLUNTEER LIVING ALLOWANCE

Scales	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	4.1538	3.7692	-.3846	.6722	4.7333	4.8000	-.0667	.2112
inexpert - expert	3.3077	3.4615	.1538	.7137	4.2000	3.8000	-.4000	.9211
foolish - wise	3.3077	3.4615	.1538	.2976	4.7333	4.5333	-.2000	.6124
bad - good	5.0000	4.9231	-.0769	.1502	4.8667	5.2000	.3333	1.2336
cruel - kind	4.2308	3.7692	-.4615	1.1476	4.2667	4.3333	.0667	.2112
meaningless - meaningful	4.3846	4.6923	.3077	.5394	5.4667	6.0000	.5333	1.5865
useless - useful	5.8462	5.5385	-.3077	.6928	6.3333	6.4000	.0667	.1862
POTENCY								
small - large	3.0000	2.9231	-.0769	.2007	3.1333	3.6667	.5333	1.2582
soft - hard	4.0769	4.2308	.1538	.2907	4.6667	4.1333	-.5333	1.6578
weak - strong	3.2308	4.0000	.7692	1.7452	4.0000	3.9333	-.0667	.1862
shallow - deep	3.3077	3.4615	.1538	.5620	3.8667	3.6667	-.2000	.7157
dull - sharp	3.6154	3.6154	.0000	------	4.2667	3.8000	-.4667	1.2841
ACTIVITY								
passive - active	3.6923	4.3077	.6154	1.1448	4.2000	4.3333	.1333	.3543
slow - fast	3.0769	4.3077	1.2308	4.3818**	4.4000	3.9333	-.4667	.9226
simple - complex	2.8462	3.6923	.8462	1.8773	4.2000	4.2000	.0000	------
calming - exciting	4.0000	4.3077	.3077	.7722	4.5333	3.8667	-.6666	1.7185
relaxed - tense	4.1538	4.3846	.2308	.8216	4.3333	4.0000	-.3333	1.0000
OTHER								
disorganized - organized	4.4615	4.0769	-.3846	.6857	5.0000	4.1333	-.8667	2.3848*
old - new	2.3077	3.9231	1.6154	3.7417**	4.2000	4.4000	.2000	.5867
difficult - easy	3.3846	3.6154	.2308	.4921	3.2000	3.8000	.6000	1.1263
frightening - reassuring	5.0769	4.4615	-.6154	1.4254	4.5333	4.8667	.3333	.8367
	N = 13				N = 15			

*p. < .05, two-tailed.
**p. < .01, two-tailed.

Table 9:3 (continued)

PEACE CORPS VOLUNTEER

Scales	ORIGINAL VOLUNTEER				REPLACEMENT VOLUNTEERS			
	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	5.6316	5.7895	.1579	.7183	6.5556	5.8889	-.6667	2.7487*
inexpert - expert	3.8947	4.2632	.3684	1.0461	6.0000	5.3333	-.6667	1.7195
foolish - wise	4.8421	4.5789	-.2632	1.3156	5.6667	5.3889	-.2778	1.5674
bad - good	5.4737	5.4211	-.0526	.2032	6.0556	6.0056	.0000	------
cruel - kind	5.2632	5.0526	-.2105	1.0000	5.9444	5.9444	.0000	------
meaningless - meaningful	5.6316	5.0526	-.5789	.3567	6.5556	6.3889	-.1667	1.0000
useless - useful	5.7368	5.5263	-.2105	.7471	6.5556	6.2778	-.2778	1.7613
POTENCY								
small - large	4.3684	4.9474	.5789	1.6797	5.1111	4.8333	-.2778	.6636
soft - hard	4.7895	4.4211	-.3684	.8360	5.6111	4.2222	-1.3889	5.1475**
weak - strong	5.4737	5.1053	-.3684	1.1966	6.2222	5.7778	-.4444	1.8103
shallow - deep	5.2632	1.2071	-.0526	.2236	6.0000	5.3333	-.6667	3.1168**
dull - sharp	5.6316	5.0526	-.5789	3.0125**	6.1111	5.5556	-.5556	2.1493*
ACTIVITY								
passive - active	5.4211	5.7895	.3684	1.0223	6.6111	6.2222	-.3889	3.2891**
slow - fast	5.2105	4.5789	-.6316	1.4552	5.4444	4.9444	-.5000	1.4477
simple - complex	5.7895	5.3684	-.4211	1.4552	5.3889	5.8889	.5000	1.5837
calming - exciting	4.8947	5.1053	.2106	.3647	6.0556	5.5556	-.5000	1.5394
relaxed - tense	4.3684	4.0526	-.3158	.7939	4.3889	3.7222	-.6667	2.9155**
OTHER								
disorganized - organized	5.1053	4.7368	-.3684	.3567	5.8333	5.6111	-.2222	.9397
old - new	5.3158	5.0000	-.3158	1.1016	5.0556	4.7778	-.2778	1.0452
difficult - easy	3.5789	3.4211	-.1579	.4108	3.2778	3.7778	.5000	1.4891
frightening - reassuring	5.0000	4.3684	-.6316	1.4331	4.8333	5.2222	.3889	1.3271
		N = 19			N = 18			

* p. < .05, two-tailed. **p. < .01, two-tailed.

Table 9:3 (continued)

MYSELF

Scales	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	5.1579	5.3684	.2105	1.0000	6.0000	5.6667	-.3333	1.8439
inexpert - expert	4.3684	4.4737	.1053	.3567	4.9444	5.1111	.1667	.4699
foolish - wise	4.8421	4.9474	.1053	.3833	5.5556	5.3889	-.1667	.8246
bad - good	5.5790	5.3684	-.2105	1.2865	5.9444	5.4444	-.5000	1.8439
cruel - kind	5.4737	5.4737	.0000	------	5.8889	6.0556	.1667	.4699
meaningless - meaningful	5.8947	5.7368	-.1579	.8250	6.4444	5.2222	-.2222	1.1662
useless - useful	5.8421	5.5263	-.3158	1.0307	6.5000	6.0000	-.5000	2.6992*
POTENCY								
small - large	5.0526	4.6842	-.3684	1.3255	5.2778	5.0556	-.2222	.5236
soft - hard	4.3684	3.8947	-.4737	1.4863	4.3333	3.7778	-.3545	1.5674
weak - strong	5.4211	4.9474	-.4737	2.9636**	5.7778	5.3889	-.3889	1.1974
shallow - deep	5.1579	5.6842	.5263	2.3792*	6.1111	5.7222	-.3889	1.5912
dull - sharp	5.4211	5.0526	-.3684	2.1106*	6.1667	5.4444	-.7222	2.4964*
ACTIVITY								
passive - active	5.6316	5.1579	-.4737	1.5801	5.5556	5.5556	.0000	------
slow - fast	5.3684	5.1053	-.2632	1.3156	5.2778	5.0000	-.2778	1.2298
simple - complex	5.0000	5.5263	.5263	1.6059	5.6111	5.8333	.2222	1.0000
calming - exciting	4.4211	4.3158	-.1053	.1970	4.1667	4.0000	-.1667	.1946
relaxed - tense	4.2632	4.0526q	-.2105	.8895	3.3333	3.5000	.1667	.3575
OTHER								
disorganized - organized	5.4737	5.2105	-.2632	.8932	5.8333	5.6667	-.1667	1.0000
old - new	4.8421	4.4211	-.4211	1.6368	4.7222	4.3889	-.3333	1.0308
difficult - easy	4.0526	4.0526	.0000	------	3.7222	4.3333	.6111	1.5714
frightening - reassuring	5.0000	4.7368	-.2632	.8932	5.6111	5.2222	-.3889	1.5107
	N = 19				N = 18			

*p. < .05, two-tailed.
** p. < .01, two-tailed.

Table 9:3 (continued)

TEACHING SCHOOL

Scales	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	5.6842	5.4211	-.2632	.7200	6.5263	6.3158	-.2105	.6975
inexpert - expert	5.0526	4.7895	-.2632	.6522	5.9474	5.9474	.0000	-------
foolish - wise	5.2632	5.4737	.2105	.5553	5.9474	5.8421	-.1053	.4376
bad - good	5.9474	5.8947	-.0526	.1949	6.5789	6.3684	-.2105	.7210
cruel - kind	5.5263	5.1579	-.3684	.9595	5.6316	5.5789	-.0526	.1875
meaningless - meaningful	6.1579	6.3158	.1579	.7661	6.6842	6.8421	.1579	1.1430
useless - useful	6.3158	6.3684	.0526	.2127	6.7368	6.7895	.0527	.3254
POTENCY								
small - large	4.8421	5.1579	.3158	.8601	5.3158	5.2632	-.0526	.1646
soft - hard	5.8421	4.2105	-1.6316	5.2992**	5.5263	4.6842	-.8421	1.8544
weak - strong	5.4211	4.6842	-.7368	2.5011*	5.5263	5.2105	-.3158	1.0307
shallow - deep	5.2632	4.8947	-.3684	1.0000	6.0526	5.7368	-.3158	.9719
dull - sharp	5.4737	4.6842	-.7895	2.0412	5.3158	5.4211	.1053	.3349
ACTIVITY								
passive - active	6.0526	5.3168	-.7368	2.1106*	6.1579	6.5789	.4211	1.7143
slow - fast	4.6842	4.1053	-.5789	1.1503	4.8421	3.7895	-1.0526	3.1193**
simple - complex	5.5789	5.2105	-.3684	.8489	5.8947	6.1053	.2105	.5443
calming - exciting	5.4737	5.6316	.1579	.3429	5.9474	5.7268	-.2106	.3973
relaxed - tense	4.5789	4.7895	.2105	.6761	3.8947	3.8421	-.0526	.1421
OTHER								
disorganized - organized	5.6842	4.5789	-1.1053	3.3250**	6.1579	5.9474	-.2105	.8090
old - new	4.3158	4.0526	-.2632	.4874	3.7368	3.5789	-.1579	.3003
difficult - easy	2.7368	2.8421	.1053	.2606	2.5789	2.8947	.3158	.5896
frightening - reassuring	5.4211	4.5263	-.8947	2.9347**	4.8947	4.5263	-.3684	.7246
	N = 19				N = 19			

*p. < .05, two-tailed.
** p. < .01, two-tailed.

Table 9:3 (continued)

INSTRUCTIONAL TV IN SCHOOLS

Scales	ORIGINAL VOLUNTEERS				REPLACEMENT VOLUNTEERS			
	First Mean	Second Mean	Difference	t.	First Mean	Second Mean	Difference	t.
EVALUATION								
uninteresting - interesting	5.8000	5.4500	-.3500	.7698	6.1667	5.6667	-.5000	1.1063
inexpert - expert	5.0000	5.1500	.1500	.4837	5.2222	5.1111	-.1111	.2233
foolish - wise	5.4000	5.2500	-.1500	.6789	6.0000	5.5000	-.5000	1.2308
bad - good	5.8500	5.3000	-.5500	1.3733	6.4444	5.8889	-.5556	1.9656
cruel - kind	4.8000	4.8000	.0000	------	4.4444	4.7778	.3334	1.4577
meaningless - meaningful	6.0500	5.4500	-.6000	1.3900	6.5556	6.1667	-.3889	1.0223
useless - useful	6.2000	5.7000	-.5000	1.2280	6.6667	5.9444	-.7222	2.0073
POTENCY								
small - large	5.1500	4.5500	-.6000	1.6096	5.3889	5.2778	-.1111	.2373
soft - hard	5.2000	4.1000	-1.1000	3.5838**	4.9444	4.2778	-.6667	1.8918
weak - strong	5.4500	4.5500	-.9000	2.3486*	5.3889	4.8333	-.5556	1.5281
shallow - deep	4.7500	4.7500	.0000	------	5.2222	4.9444	-.2778	.5077
dull - sharp	5.4000	4.8500	-.5500	1.7179	5.3333	4.5556	-.7778	1.7126
ACTIVITY								
passive - active	5.9500	5.1000	-.8500	2.3305*	5.8333	5.2222	-.6111	1.2240
slow - fast	4.5000	4.8500	.3574	.9791	4.5556	3.8889	-.6667	1.3205
simple - complex	5.3500	5.2000	.1000	.4837	5.5556	5.7222	.1667	.3879
calming - exciting	5.3000	5.4000	.1000	.2294	4.9999	5.3889	.3890	.7442
relaxed - tense	4.5500	4.3000	-.2500	.8151	4.1667	4.1667	.0000	------
OTHER								
disorganized - organized	5.5000	4.3500	-1.1500	3.1530**	6.0556	5.0556	-1.0000	2.3376*
old - new	6.3000	5.7000	-.6000	2.2593*	5.8889	5.7222	-.1667	.6778
difficult - easy	3.1500	2.8000	-.3500	.8241	3.0000	2.7778	-.2222	.5788
frightening - reassuring	4.9000	4.4500	-.5000	1.2689	5.1111	4.3889	-.7222	1.8310
	N = 20				N = 18			

*p. < .05, two-tailed.
**p. < .01, two-tailed.

$p. < .05$, two-tailed, and a double asterisk (**) denotes a change significant at $p. < .01$, two-tailed. (A two-tailed criterion is used because we had no a priori reasons for advancing hypotheses about the direction of changes. Because the quantity of data is so large and the number of clearly significant changes so great we will give no attention to changes that are marginally significant at $p. < .10$, but the inclusion of the t's will allow the reader to take these into consideration if he wishes.)

Let us look at the data on the first concept in Table 9:3, "Colombian Government." The data on the replacement Volunteers provide the more interesting example for there are more significant changes than for the original Volunteers. If we look down the t column, we see that there are 12 t's followed by asterisks, indicating 12 significant changes. The first of these occurs on the "foolish-wise" scale. The mean upon arrival was 4.1667, the mean three months later was 2.8889, a negative shift (- 1.2778). The resulting t is 4.2538, significant at $p. < .01$, two-tailed. Thus, over their first three months these Volunteers significantly reduced the degree to which they regarded "Colombian Government" as "wise." The other scales where significant changes occurred can be read in the same way. We can also see the general trend of the direction of changes, significant or not, by looking down the column of differences at the signs preceding the degree of change on each scale. In this instance, we find that all 21 shifts were in a negative direction.

It is also possible, of course, to compare the ratings made by the two Volunteer groups. We have not statistically assessed the significance of the differences on individual scales for any of the possible comparisons between groups since a sufficiently clear and precise picture of their relative orientation can be obtained simply by counting the frequency over all scales for a single concept with which the means of one group exceed those of the other and evaluating the deviation from a fifty-fifty, or chance, split by sign test. For example, for the concept "Colombian Government" in the first ratings the replacement Volunteers gave higher values on 19 out of the 21 scales, a statistically significant more positive orientation ($p. < .01$, two-tailed, by sign test).

Now it is time to examine the findings. We will first assess the general tendencies and focus for readjusting perspectives at these two points in service -- the first months and the last months -- by comparing the gross number of changes, positive or negative, between the two Volunteer groups. Then we will review the changes for each group separately. Finally, we will consider the general orientation or relative perspectives of the two groups.

Differences Between the Amount and Focus of Changes in Perspective: Since significant changes in ratings over the three months indicate changes in the meaning of the concepts to the Volunteers, the gross number of significant changes provides an index of the amount of readjustment in outlook occurring. In Table 9:4 we have presented a breakdown by concept of the number of significant changes that makes it easy to see a) gross differences in the amount of attitudinal readjustment, and b) differences in the focus of such readjustment.

Let us look at this table. For each group of Volunteers the number of significant changes on each concept are broken down by the dimensions under which the scales have been grouped. The first concept is "Colombian Government" and we can see that the original Volunteers changed significantly

Table 9:4 Number of Significant Changes (positive or negative, p < .05, two-tailed) in Ratings of 16 Concepts

Significant Changes (out of 21 scales on each concept) Among:

	Original Volunteers Scales Classified As:					Replacement Volunteers Scales Classified As:				
Concept	E	P	A	O	Total	E	P	A	O	Total
Colombian Government	3	-	2*	1	6	4	4	3	1	12
Colombian Reliability	-	-	-	-	-	1	-	-	1	2
Colombian Interest in Education	1*	-	1	-	2	1	3	4	-	8
Colombian Educational Methods	1	-	1*	-	2	5	1	2	-	8
Colombian Classrooms	1*	-	1*	-	2	2	3	1	1	7
Television Teacher	5	1	2	1	9	6	5	4	2	17
Classroom Teacher	-	-	-	-	-	1	1	-	1	3
Peace Corps	4	-	-	-	4	2	1	-	1	4
Peace Corps Staff	1*	-	-	-	1	5	5	2*	1	13
Peace Corps ETV Project	2	3	-	-	5	1	1	1	1	4
Peace Corps ETV Shows	-	-	-	-	-	2	-	2	2	6
Volunteer Living Allowance	-	-	1*	1*	2	-	-	-	1	1
Peace Corps Volunteer	-	1	-	-	1	1	3	2	-	6
Myself	-	3*	-	-	3	1	1	-	-	2
Teaching School	-	2	1	2	5	-	-	1	-	1
Instructional TV in Schools	-	2	1	2	5	-	-	-	1	1
Total Significant Changes:	18	12	10	7	= 47	32	28	22	13	= 94
Total Possible:	112	80	80	64	336	112	80	80	64	336
Positive Changes:	3	1	5	1	= 9			1		= 1

* All changes in negative direction except when asterisked. Each asterisk represents one positive change.

Key: E = Scales classed as reflecting evaluative dimensions (total of 7 scales).
P = Scales classed as reflecting "potency" dimension (total of 5 scales).
A = Scales classed as reflecting "activity" dimension (total of 5 scales).
O = Scales not classified (total of 4 scales).

pp.<.05, two-tailed, of course includes p.<.01, two-tailed.

on three of the seven "evaluative" scales, on none of the five "potency" scales, on two of the five "activity" scales, and on one of the four unclassified scales, for a total of six significant changes on the 21 scales. On the other hand, the replacement Volunteers changed significantly on four of the seven "evaluative" scales, on four of the five "potency" scales, on three of the five "activity" scales, and on one of the four unclassified scales, for a total of 12 significant changes on the 21 scales. Thus, in regard to the concept "Colombian Government" there was a great deal more change in perspective among the Volunteers who were beginning their service than among those who were in their last months.

The results for the other concepts can be read in the same way. At the bottom of the table the overall number of changes are totalled. In addition, because the majority of the changes for both groups were in a negative direction we have been able to preview the findings on the nature of the changes by indicating the positive shifts by asterisk. Each asterisk denotes one positive shift among the changes. Thus, the asterisk beside the two changes among the five "activity" scales for the original Volunteers on "Colombian Government" indicates that one of these was in a positive direction. When there is an asterisk beside only one change, of course, it indicates that that change was positive.

This table gives us a very good grasp of the results. It also leads to the following findings:

1) The replacement Volunteers underwent markedly more readjustment of perspective than did the original Volunteers during this period. For each group, there were 336 possibly significant changes (16 concepts x 21

scales). We find that for the replacement Volunteers there were 94 significant changes, or about 28 per cent of the total possible, during the first three months of service. For the original Volunteers there were only 44 significant changes, or about 13 per cent of the total possible, during the last three months of service.

This dramatic difference in the gross number of changes is quite important. It increases our confidence in the meaningfulness of the character of the changes, which we will examine later, since it makes it clear that changes in the stimuli represented by the concepts -- the actual persons and institutions -- cannot be considered as complete explanation of the changes (if the stimuli only had changed, we would expect more similarity in the number of changes between the groups). It also confirms the widely held view that the early months of service are likely to be a period of psychological readjustment for Volunteers.

2) The focus of psychological readjustment was different for the replacement and original Volunteers. We can see this by comparing the number of significant changes by concept for the two groups. The amount of change was either greater or about equal for the replacement Volunteers except for two concepts, "Teaching School" and "Instructional Television in Schools." For "Teaching School" there was only one change among the replacement Volunteers but for the original Volunteers there were five changes. And for "Instructional Television in Schools" there was one change among the replacement Volunteers but for the original Volunteers there were five changes. These were the two concepts we felt represented education in general rather than some specific aspect of the Peace Corps or Colombian environment experienced by ETV Volunteers, and we doubt that

this reversal of the general trend occurred by chance. Instead, we would interpret this difference between the groups as indicating that the replacement Volunteers were readjusting their perspectives in regard to things that would figure importantly in their future as Volunteers, while the original Volunteers were primarily readjusting their perspectives in regard to general ideas to which their particular Peace Corps service had some relevance but which were pertinent to their post-Peace Corps lives.

For the original Volunteers about 21 per cent of their total changes (10 out of 47) were concentrated in these two concepts; for the replacement Volunteers less than two per cent (2 out of 94) occurred there. We find the evidence convincing that the original Volunteers in their last months were attempting to make their Peace Corps experience relevant to the future while the replacement Volunteers in their first months were focused almost entirely on their immediate concerns with little readjustment in regard to its broader applications.

3) The replacement Volunteers shifted their perspectives primarily in regard to eight Colombia- and Peace Corps-related concepts. If we take the changes among the original Volunteers as a standard, we find the replacement Volunteers shifting most dramatically in regard to: "Colombian Government" (original Volunteers, six changes, replacement Volunteers 12); "Colombian Interest in Education" (original Volunteers, two; replacement Volunteers, eight); "Colombian Educational Methods" (original Volunteers, two; replacement Volunteers, eight); "Colombian Classrooms" (original Volunteers, two; replacement Volunteers, seven); "Television Teacher" (original Volunteers, nine; replacement Volunteers,

17); "Peace Corps Staff" (original Volunteers, one; replacement Volunteers, 13); "Peace Corps ETV Shows" (original Volunteers, none; replacement Volunteers, six); and "Peace Corps Volunteer" (original Volunteers, one; replacement Volunteers, six). These eight concepts account for 77, or about 82 per cent, of the replacement Volunteers' 94 significant changes.

4) There is little support for the frequently advanced contentions that the first or the last months of service are periods of strong personal reexamination. This is a surprising finding, but one that seems to hold at least for these Volunteers. In regard to the concept "Myself" there were only three changes among the original Volunteers and only two changes among the replacement Volunteers. In a context of such very large numbers of changes among the replacement Volunteers in regard to other concepts, we must conclude that there is very little evidence of change on this personal concept. The original Volunteers, for whom changes generally were less frequent, showed no markedly greater tendency to shift on "Myself" than on most of the other concepts (and there were more changes on five other concepts -- "Colombian Government," six; "Television Teacher," nine; "Peace Corps ETV Project," five; "Teaching School," five; and "Instructional Television in Schools," five).

As we have noted, however, there was some indication that the replacement Volunteers, but not the original Volunteers, changed their view to an appreciable extent in regard to the somewhat personal concept representing their role, "Peace Corps Volunteer" (one change among the original Volunteers, six changes among the replacement Volunteers). What the data suggest is that not much change in regard to one's view of oneself occurs in these two supposedly critical periods of psychological adjustment, whatever the amount of introspection and self-examination that may occur (the data do not indicate that such thinking does not occur, only that it does not result in a changed self-picture during either of the two periods). The change tended to be in regard to the role, and to occur only among those who were assuming it for the first time.

5) We may preview some of our findings by noting the extreme predominance among the replacement Volunteers of negative shifts over the first three months. In *Table 9:4*, we have indicated each *positive* shift by an asterisk. All other shifts are negative. As can be seen, among the replacement Volunteers there was only *one* instance, out of the 336 scales on which there were 94 significant changes, that involved a rating at a higher value the second time. For the original Volunteers, there were ten positive shifts. Thus, of all significant shifts, there were about wl per cent positive for the original Volunteers (10 out of 47), but only about one per cent positive for the replacement Volunteers (1 out of 94). The overwhelming tendency of the significant changes among the replacement Volunteers to be negative forces the conclusion that between their arrival in Colombia after completing training and the end of the first three months of service they shifted toward a more negative picture in regard to the concepts (outlined above) on which their changes were concentrated.

Changes During the Last Months of Service: The original Volunteers changed far less than did the replacement Volunteers over all scales and concepts (47 significant changes out of a total of 336 scales on the 16 concepts, compared with 94 significant changes for the replacement Volunteers) and their changes were comparatively heavy on concepts of general relevance on which their Peace Corps experience had some bearing, "Teaching School" and "Instructional Television in Schools" (10 out of the 47 significant changes, or more than one-fifth, compared with two out of 94, or only about two per cent, for the replacement Volunteers). As this indicates, the original Volunteers tended to remain rather stable in regard to concepts exclusively relevant to their Peace Corps service. The contrast with the replacement Volunteers is even more striking if only those bearing on Colombia or the Peace Corps are considered (excluding the concepts "Teaching School," "Instructional Television in Schools," and "Myself," there were on the remaining 13 concepts only 34 significant changes among the original Volunteers compared with 90 among the replacement Volunteers) or if the direction of change on these concepts is considered (on the 13 concepts, nine of the 34 significant changes were in a positive direction among the original Volunteers, compared with only one of the 91 among the replacement Volunteers). Among the original Volunteers, the picture of psychological readjustment is comparatively one of stability except for the two concepts of broad relevance.

We have prepared a summary of the significant changes among the original Volunteers that makes it easy to see the nature of the changes that did occur. For each concept the direction of significant changes and the scales on which they occurred are as follows ("less" indicates a negative change, "more" a positive change, and the scale is identified by the adjective denoting the scale's positive extreme):

Significant Changes* Among the Original Volunteers:

Concept	Evaluative (seven scales)	Potency (five scales)	Activity (five scales)	Other (four scales)
Colombian Government	less wise less good less kind		less complex more fast	less reassuring
Colombian Reliability	- - - -	- - - -	- - - -	- - - -
Colombian Interest in Education	more expert		more exciting	
Colombian Educational Methods	less wise		more fast	
Colombian Classrooms	more useful	more deep		
Television Teacher	less expert less meaningful less kind less useful less interesting	less sharp	less active less fast	less reassuring
Classroom Teacher	- - - -	- - - -	- - - -	- - - -
Peace Corps	less interesting less wise less good less meaningful			
Peace Corps Staff	more expert			
Peace Corps ETV Project	less kind less meaningful	less hard less strong less sharp		
Peace Corps ETV Shows	- - - -	- - - -	- - - -	- - - -
Volunteer Living Allowance			more fast	more new
Peace Corps Volunteer		less sharp		

*p. < .05, two-tailed (which of course includes p. < .01, two-tailed).

Significant Changes Among the Original Volunteers: (cont.)

Concept	Evaluative (seven scales)	Potency (five scales)	Activity (five scales)	Other (four scales)
Myself		less strong less sharp more deep		
Teaching School		less hard less strong	less active	less organized less reassuring
Instructional TV in Schools		less hard less strong	less active	less organized less new

The degree of importance to be attached to any one of these changes depends on the significance (in a non-statistical sense) that one wishes to ascribe to the particular scale and encompassing dimension in regard to the individual concept involved. For ourselves, we find the following of particular interest: the concentration of negative shifts on the "evaluative" scales for "Colombian Government" (less wise, less good, less kind), "Peace Corps" (less interesting, less wise, less meaningful, less good), and "Peace Corps ETV Project" (less kind, less meaningful), which suggest a lowering of esteem for these elements of their service environment during the last few months; the absence of changes on "evaluative" scales for "Teaching School" and "Instructional Television in Schools," where compared to the replacement Volunteers their changes were relatively frequent, indicating a revision of perspective without a lowering of valuation; the one positive "evaluative" shift for "Peace Corps Staff" (more expert), simply because the trend of shifts overall was negative (we cannot say whether this reflects their assessment of the new staff level ETV Project director who assumed control of the project during their last six months, the help given by staff as departure neared, or a general revision; if asked to guess, we would say the first); and the two positive shifts in regard to "Colombian Classrooms" (of the "evaluative" scales, more useful; of the "potency" scales, more deep), again because positive shifts were generally less frequent, suggesting increased respect at termination for the schools' social utility.

Changes During the First Months of Service: We think there is great interest in the significant changes among the replacement Volunteers during their first months since these changes reflect the impact of actual experience on ideas largely inculcated during Peace Corps training. To assume otherwise is to believe that these Volunteers possessed such extensive information and well-formed ideas about Colombia, the Peace Corps, the ETV Project, and their various aspects that training made almost no impression on them (with the implication that perhaps it was either unnecessary or totally irrelevant), a proposition which we find untenable.

We have already pointed out that the replacement Volunteers changed to a dramatically greater extent over all concepts and scales than did the original Volunteers. We have also pointed out that the contrast is even more marked if concepts related to the Peace Corps and Colombia only are considered (excluding "Teaching School," "Instructional Television in Schools," and "Myself," there were 273 scales covering the remaining 13 concepts, and on these 273 there were 91 significant changes, or about 33 per cent, for the replacement Volunteers, and only 34 , or about 12. per cent, for the original Volunteers), and if the direction of changes on these concepts is taken into consideration (of the 34 changes among the original Volunteers, nine , or about 27 per cent, were positive, but of the 91 changes among the replacement Volunteers, only one, or only about one per cent, was positive). We have also indicated that the changes for the replacement Volunteers were concentrated on eight concepts: "Colombian Government," "Colombian Interest in Education," "Colombian Educational Methods," "Colombian Classrooms," "Television Teacher," "Peace Corps Staff," "Peace Corps ETV Shows," and "Peace Corps Volunteer."

We will now look at the significant changes among the replacement Volunteers in detail. As in the previous summary for the original Volunteers, for each concept the direction of significant changes (except in one instance, all negative) and the scales on which they occurred are shown ("less" indicates a negative change, "more" a positive change, and the scale is identified by the adjective denoting the scale's positive extreme:

Significant Changes* Among the Replacement Volunteers:

Concept	Evaluative (seven scales)	Potency (five scales)	Activity (five scales)	Other (four scales)
Colombian Government	less wise less kind less useful less good	less deep less hard less strong less sharp	less active less fast less exciting	less organized
Colombian Reliability	less kind			less organized
Colombian Interest in Education	less meaningful	less hard less strong less large	less active less fast less complex less tense	
Colombian Educational Methods	less kind less useful less interesting less wise less meaningful	less strong	less complex less active	

*p. < .05, two-tailed (which of course includes p. < .01, two-tailed).

3

Significant Changes* Among the Replacement Volunteers: (cont'd.)

Concept	Evaluative (seven scales)	Potency (five scales)	Activity (five scales)	Other (four scales)
Colombian Classrooms	less kind less wise	less hard less deep less sharp	less complex	less organized
Television Teacher	less interesting less expert less wise less meaningful less useful less good	less hard less strong less sharp less large less deep	less fast less complex less active less exciting	less organized less reassuring
Classroom Teacher	less useful	less sharp		less organized
Peace Corps	less wise less meaningful	less hard		less organized
Peace Corps Staff	less good less useful less expert less wise less meaningful	less large less hard less strong less deep less sharp	less exciting more tense	less organized
Peace Corps ETV Project	less good	less strong	less fast	less organized
Peace Corps ETV Shows	less interesting less good		less active less fast	less organized less new
Volunteer Living Allowance				less organized
Peace Corps Volunteer	less interesting	less hard less deep less sharp	less active less tense	
Myself	less useful	less sharp		
Teaching School			less fast	
Instructional TV in Schools	- - - -	- - - -	- - - -	less organized

*p. < .05, two-tailed (which of course includes p. < .01, two-tailed).

Of course, as before, the degree of importance to be attached to any one of these changes depends on the significance, in the non-statistical sense, that one wishes to ascribe to the particular scale and encompassing dimension in regard to the individual concept involved. For ourselves, we find a great deal here that is of interest.

If we consider the "evaluative" scales as measuring the esteem in which a concept is held, we find considerable evidence of disenchantment in regard to: "Colombian Government" (less wise, less kind, less useful, less good); "Colombian Educational Methods" (less kind, less useful, less interesting, less wise, less meaningful); "Television Teacher" (less interesting, less expert, less wise, less meaningful, less useful, less good); and "Peace Corps Staff" (less good, less useful, less expert, less wise, less meaningful). On these four concepts there were four or more significant shifts in a negative direction on the seven "evaluative" scales. There was also some evidence of disenchantment in regard to: "Colombian Classrooms" (less kind, less wise); "Peace Corps" (less wise, less meaningful); and "Peace Corps ETV Shows" (less interesting, less good). On these three concepts there were two shifts in a negative direction on the seven "evaluative" scales. The remaining shifts on the "evaluative" scales involved only one scale for each concept, so we are less convinced of lowered evaluation.

On two of the concepts on which there were quite a few changes, these were concentrated outside the "evaluative" scales, suggesting revised perspective but not lowered valuation: "Colombian Interest in Education" ("evaluative," less meaningful; "potency," less hard, less strong, less large; "activity," less active, less fast, less complex, less tense), and "Peace Corps Volunteer" ("evaluative," less interesting; "potency," less hard, less deep, less sharp; "activity," less active, less tense).

Most of the scales classified as "evaluative" have a literal meaning and relevance in regard to the kinds of concepts with which we are dealing (the sole exception is "cruel-kind," and only its relevance, not ordering as to favorability -- "kind" is preferable to "cruel" for most people -- could be questioned). One of the scales not classified as to underlying dimension also has a literal meaning particularly relevant to these concepts and would seem, in the context, to reflect evaluation (had we performed a separate factor analysis on this particular application of the semantic differential, it would probably have fallen with the other "evaluative" scales, as possibly would some of the others; we did not do so since the data was so readily interpretable as arranged). We refer to the scale "disorganized-organized." Ordinarily, the perceived state of order in an undertaking, role, or activity is directly related to evaluation since it is usually a determinant of effectiveness. It is noteworthy then that the replacement Volunteers found the following significantly less organized at the end of their first three months than they had first supposed: "Colombian Government," "Colombian Reliability," "Colombian Classrooms," "Television Teacher," "Classroom Teacher," "Peace Corps," "Peace Corps Staff," "Peace Corps ETV Project," "Peace Corps ETV Shows," "Peace Corps Living Allowance," and "Instructional TV in Schools." This list of eleven concepts includes three of the four for which we found considerable disenchantment (negative shifts on four or more of the "evaluative" scales) and all three of those for which we felt there was some evidence of disenchantment (two negative shifts on the "evaluative" scales).

In summary, then, the first months of service not only appear to be a period of great readjustment primarily focused on concepts relevant to the Volunteer's service, but at least for these Volunteers that readjustment is generally negative in character. Taking only the relatively clear-cut and undeniably pertinent criterion of negative changes on the "evaluative" scales, there was strong evidence of lowered valuation or esteem, or disenchantment, in regard to "Colombian Government," "Colombian Educational Methods," "Television Teacher," and "Peace Corps Staff," and considerable evidence of such change in regard to "Colombian Classrooms," "Peace Corps," and "Peace Corps ETV Shows." For all but "Colombian Educational Methods" there was also a significant negative shift on the especially pertinent scale "disorganized-organized."

We do not consider such negative shifts in regard to these important aspects of the Volunteer's working environment as desirable. There is an obvious risk of loss of morale and of lowered effectiveness. We think the findings have two major implications, one concerned with Peace Corps training and one concerned with project operation.

1) In regard to Peace Corps training, we would argue that one of its functions should be to inoculate the Volunteer against the impact of actual experience. The more accurate and effective the inoculation, the less would be the revision of perspective during the first months of service. We doubt whether these Volunteers received a sufficiently accurate picture in regard to the reality represented by the concepts on which they changed most markedly. It is not necessary that prospective Volunteers be given a particularly black picture of what they will encounter. However, the impressions they form should be sufficiently close to what they will encounter that they do not suffer the effects of disenchantment.

The implication is that instruction in training by persons unfamiliar with or removed from the particular project into which the Volunteer will enter has a penalty during early service that is all too easily dismissed under the rubrics of "personal adjustment" or "culture shock." In this respect, we should emphasize again that the negative shifts we recorded largely involved Peace Corps- and job-related concepts; in fact, on the one concept most broadly related to culture, "Colombian Reliability," there was relatively little change. In practical terms, this would seem to provide a strong argument for the use of former Volunteers from a particular project in the training of new Volunteers since they would be able to give exactly the kind and quantity of accurate information that would inoculate against disappointment overseas.

2) In regard to project operation, we think that the evidence of relatively great change in perspective during the first months emphasizes the importance for the Volunteer of information during this period. This is the time during which he tests the impressions gained during training against reality, and that reality simply consists of what he learns about the elements of his new environment. It is particularly important, then, that he have as much accurate and detailed information as possible at this time. Otherwise, impressions will be determined primarily by gossip and what the Volunteer himself can see. This suggests that the in-country Peace Corps staff, wherever possible, should try to continue the orientation of training during this period by a regular and systematic flow of information and news. Of course, keeping Volunteers informed is always desirable (and so obviously so that to advocate it is something of a cliche); however, these data suggest that it is particularly crucial during the early months.

We discussed some of the special aspects and problems of the large, integrated project, which the ETV Project exemplifies, in a previous section. We would like to add, however, that these implications have particular application to such a project simply because the elements of the new environment are the same for so many Volunteers. This makes the job of forming accurate impressions easier and more feasible, but also more important.

General Orientation of the Replacement vs. the Original Volunteers: A hurried examination of the data in the omnibus Table 9:3 would suggest that the replacement Volunteers tended to give higher ratings on most concepts than the original Volunteers in the first measurement. A more precise examination supports this initial impression. We have not calculated significant differences between ratings on individual scales because a sign-test of the overall trend by concept is sufficient for this particular comparison (sign tests or the differences in the quantity of negative and positive changes for each concept also would have given the same general picture for changes within the groups as the assessment of significant change by scale, but it would not have provided the specifics on individual scales which, for the within group changes, were of particular interest). This comparison is shown in Table 9:5.

As can be seen, the replacement Volunteers gave a significantly greater number of higher ratings on all but three of the concepts ("Myself," "Teaching School," and "Instructional Television in Schools") and on one of these the number of higher ratings by the replacement Volunteer approached significance ("Teaching School," p. < .08, two-tailed). In short, these Volunteers entered the project with more positive impressions of all the Peace Corps- and Colombia-related concepts than the original Volunteers held after 18 months of service.

Of course, the negative shifts on the part of the replacement Volunteers tended to bring their ratings more in line with those of the original Volunteers. If we make a similar comparison between the ratings of the replacement Volunteers in their second measurement and those of the original Volunteers in their first measurement -- which amounts to a comparison of Volunteer ratings after three months of service with ratings after 18 months of service -- we find that the ratings of the replacement Volunteers remained significantly higher on four concepts ("Peace Corps Volunteer," p. < .05, two-tailed; "Volunteer Living Allowance," and "Colombian Reliability," both p. < .01; and "Peace Corps Staff," p. < .001, two-tailed) and were almost significantly higher on four more concepts ("Colombian Government," "Colombian Educational Methods," "Colombian Interest in Education," and "Colombian Classrooms," all p. < .08, two-tailed). There was one concept, "Television Teacher," for which the replacement Volunteers' ratings dropped below those of the original Volunteers with significant consistency (p. < .001, two-tailed). Apparently, this was a concept for which the disparity between pre-service impressions and project reality was particularly great. This comparison also is shown in Table 9:5 (the data in parentheses).

Summary and Discussion: When the large contingent of replacement utilization Volunteers arrived in mid-1965, their service overlapped for about three months with that of the original utilization Volunteers, and we took advantage of the situation by using a procedure to study Volunteer adjustment that allowed us to examine the two groups jointly. When

Table 9:5 Initial Ratings of Original and Replacement Utilization Volunteers Compared by Sign Test for Each of 16 Concepts (and Final Ratings by Replacement vs. Initial Ratings by Original Volunteers)

Of the 21 Scales for Each Concept:

Concept	Replacement Volunteer Mean Higher than Original Volunteer Mean		Original Volunteer Mean Higher than Replacement Volunteer Mean		p. two-tailed	
Colombian Government	19	(15)*	2	(6)	<.001	(<.08)
Colombian Reliability	20	(17)	1	(4)	<.001	(<.01)
Colombian Interest in Education	20	(15)	1	(6)	<.001	(<.08)
Colombian Educational Methods	21	(15)	-	(6)	<.001	(<.08)
Colombian Classrooms	19	(16)	2	(3)	<.001	(<.08)
Television Teacher	17	(2)	4	(19)	<.01	(<.001)
Classroom Teacher	18	(13)	3	(8)	<.01	(---)
Peace Corps	19	(14)	2	(7)	<.001	(---)
Peace Corps Staff	19	(19)	2	(2)	<.001	(<.001)
Peace Corps ETV Project	16	(13)	5	(8)	<.05	(---)
Peace Corps ETV Shows	17	(11)	4	(8)	<.01	(---)
Volunteer Living Allowance	18	(17)	3	(4)	<.01	(<.01)
Peace Corps Volunteer	17	(16)	4	(5)	<.01	(<.05)
Myself	14	(13)	7	(8)	---	(---)
Teaching School	15	(14)	6	(7)	<.08	(---)
Instructional TV in Schools	12	(9)	9	(12)	---	(---)

*The data within parentheses constitute a separate comparison, so that this is properly read as two tables combined. In each case, the figures represent the number of times the mean of one group exceeded the other on each concept. When the total for a concept is less than 21, the remaining means were exactly equal (this only happened twice, and only for the data in parentheses). The data without parentheses compare the ratings between groups at the first measurement -- the replacement Volunteers upon arrival vs. the original Volunteers at 18 months'service. (The data in parentheses compare the ratings between groups at the second measurement for the replacement Volunteers and the first measurement for the original Volunteers -- the replacement Volunteers at three months' service vs. the original Volunteers at 18 months.)

the replacement Volunteers arrived we measured the perceptions of both groups in regard to 16 concepts, using the well-known semantic differential technique, and when the original Volunteers left Colombia we repeated the measurements on both groups. There were 21 scales, identical for every concept, in the semantic differential used. About three months intervened between measurements.

The resulting data provide a description of the changing perspectives of Volunteers during the first and last months of service. There is particular interest in the results for the replacement Volunteers since the data reflect the impact of service on impressions largely formed by Peace Corps training. This portion of the data can be construed as testing the accuracy and viability of the picture given in training of what the Volunteers would encounter in service.

The concepts, selected to represent as fully as possible the experiential world of these Volunteers, were: "Colombian Government," "Colombian Reliability," "Colombian Interest in Education," "Colombian Educational Methods," "Colombian Classrooms," "Television Teacher," "Classroom Teacher," "Peace Corps," "Peace Corps Staff," "Peace Corps ETV Project," "Peace Corps ETV Shows," "Volunteer Living Allowance," "Peace Corps Volunteer," "Myself," "Teaching School," and "Instructional Television in Schools."

In comparing the changes over the three months for the two groups, we found:

1) The replacement Volunteers underwent markedly more change, or revision of perspective, than did the original Volunteers, confirming the widely held view that the early months of service are likely to be a period of psychological readjustment.

2) The focus of readjustment was different for the two groups, with the replacement Volunteers shifting in regard to Colombia- and Peace Corps-related concepts and the original Volunteers shifting in regard to general notions ("Teaching School" and "Instructional Television in Schools"). The replacement Volunteers were preparing themselves for their post-Peace Corps future by taking stock of broader ideas for which their Peace Corps experience had some relevance.

3) The replacement Volunteers shifted primarily in regard to eight concepts: "Colombian Government," "Colombian Interest in Education," "Colombian Educational Methods," "Colombian Classrooms," "Television Teacher," "Peace Corps Staff," "Peace Corps ETV Shows," and "Peace Corps Volunteer." These eight accounted for 77, or about 82 per cent, of these Volunteers' significant changes on the various scales over the three months. Apparently, these were the concepts for which training gave them the least accurate impression when tested by actual experience.

4) There was little support for the frequently advanced contentions that the first or last months of service are periods of strong personal reexamination, for there were very few significant changes for either group on the concept "Myself." There was quite a great deal of revision among the replacement Volunteers on "Peace Corps Volunteer," indicating that change in perspective is confined to role and largely limited to the first months.

5) The significant changes among the replacement Volunteers were overwhelmingly and dramatically negative, with only one out of the 94 changes on the various scales for the 16 concepts being in a positive

direction. The concepts on which their changes were concentrated, then, can be interpreted as areas of particular disenchantment.

6) A comparison of the level of ratings between the two groups indicated that at the first measurement the replacement Volunteers were significantly more favorably oriented toward Colombia- and Peace Corps-related concepts than were the original Volunteers -- that is, the ratings for the entering Volunteers were higher than those for the Volunteers who had completed 18 months service. The overwhelmingly negative character of the shifts among the replacement Volunteers brought their ratings more in line with those of the original Volunteers, but after three months the replacement Volunteers' ratings still tended to exceed those made by the original Volunteers at the 18-months point, although less consistently and clearly so.

We found the results for the replacement Volunteers to have implications for Peace Corps training and project operation. In regard to training, we argued that one of its functions should be to inoculate the Volunteer against the impact of actual experience by supplying sufficiently accurate and detailed information that his impressions will withstand the test of reality in the field. Otherwise, we would suggest, there is a serious risk of lowered morale and effectiveness, especially when the test of reality leads to largely negative revision. The implication is that training by persons unfamiliar with or too far removed from project or country is likely to have a penalty during the first months of service whose immediate cause is not apparent. In practical terms, the results seem to provide a strong argument for the extensive use in training of former Volunteers from a particular project, since they would be able to provide exactly the kind and quantity of information needed. In regard to project operation, we suggested that the evidence that the first few months are a time of matching impressions against reality implies that this is a particularly critical period when the Volunteer needs and puts to use as much information as he can gather. If so, this is also a period when the Peace Corps staff in a country should give particular attention to keeping Volunteers as informed, up-to-date, and involved in a project as possible.

If we make the assumption (unproven) that training is a period during which evaluative judgment is relatively suspended while impressions are being formed, then the data also could be considered as support for concluding the training period in-country. Under this assumption the risk of a negative impact on morale could be avoided by insuring that firm impressions and judgments were not formed until after actual experience in the field. We must emphasize, however, that all this is speculation since we had no opportunity to collect data on this point.

We should also add that, although the quantity of data was enormous (21 scales for each of 16 concepts at two points in time for two different groups, leading to a total of 1,344 measurements), the interpretation was clear-cut and unambiguous. We would recommend the technique (semantic differential) whenever it would seem to have a useful application to anyone concerned with Peace Corps Volunteers.

Part IV: The Volunteers -- Summary and Discussion

We have brought together a variety of studies and interpretations concerned with the experience of the Volunteers who served in the ETV Project during our two years of field study in Colombia. To summarize briefly:

In Part I, we outlined the history in the project of the two large contingents of Volunteers -- the 82 "original" ETV Volunteers who inaugurated the project at the beginning of 1964, and the 55 "replacement" Volunteers who arrived in Colombia in mid-1965. We found that attrition from the project was much greater among the original than the replacement Volunteers, which we attributed to the greater frustration and resulting loss of morale experienced by the original Volunteers because they did not enter an existing organization. The implication is that a new project should try to emulate the characteristics of a more mature undertaking as much as possible.

Taking the ETV Project as an example, we then specified some of the characteristics likely to be peculiar to large, special purpose Peace Corps projects, related these characteristics to special problems to which they are likely to give rise, and suggested what can be done about these problems. We argued that the large project has special features with consequences for Volunteer effectiveness not encountered in many kinds of Peace Corps activity, and that such projects require treatment different from the ordinary. We suggested that our comments had broad applicability, since the project characteristics are not confined to television, education or Latin American projects.

The project characteristics we found particularly relevant for Volunteer effectiveness were: a) highly centralized organization encompassing a large number of Volunteers in a single undertaking; b) staff level direction by a substantive specialist; c) interdependence of groups of Volunteers performing markedly different jobs -- in more formal terms, the integration in a common effort of Volunteers in functionally distinct roles; d) geographical dispersion and relative isolation of Volunteers engaged in the same integrated project; 3) dependence on cooperation and support from host country agencies (often at a level above the Volunteer); f) a goal of building a large, multi-faceted host country organization to supplant that of the Peace Corps (the intent is common to all Peace Corps activities, but the scale and complexity of the task is many times greater in the large project); g) consulting, not teaching, in schools; h) continuity beyond a single Volunteer term of service of a complex organization; and, i) newness of the type of undertaking.

The problems to which we felt these gave rise in various ways were: a) lack of coordinated, cooperative effort between Volunteers performing different functions ("clique-ishness"); b) inappropriate recruitment and training; c) inaccurately defined and specified roles; d) defection to other activities (a parting from the project in fact, if not in status); and, e) doubt over achievement. The sum effect is to reduce effectiveness.

We suggested that the large project called for: a) advance detailed specification of Volunteer roles (the Volunteer in the large project can't be effective on his own, so he should not be left to flounder);

b) joint training of Volunteers expected to coordinate activities, even if they will have very different jobs; c) strong project-oriented leadership; d) systematic, prompt dissemination of project information; e) appointment of Volunteer leaders for areas and specialized functions as soon as possible; f) special Volunteer conferences; g) in-service training for Volunteers (we would consider site visits by staff in this category _if_ they are qualified to advise the Volunteer substantively); h) project-shaped policies; i) prompt Volunteer assignment to specific tasks; and, j) a schema and timetable for host country organization-building (it's hard to build capability if the capability needed cannot be specified).

One aspect of the large project underlay much of our discussion, but is so obvious that its enormous importance can be overlooked. We refer to the large number of Volunteers that are involved. Because there are so many in the same undertaking defiencies have a much greater cost than when Volunteer activities are highly individualized.

In _Part II_, we analyzed changes in attitudes, opinions, and views among some of the original Volunteers during service. The data came from a questionnaire designed to range widely over a comprehensive range of topics pertinent to Volunteer service that was completed by the Volunteers shortly after they began service and again upon termination. After grouping the items empirically by factor analysis, we assessed significant changes. Because we felt a homogeneous group would provide the most sensitive measurement of change, we confined the change analysis to 22 utilization Volunteers who trained together and had the same kind of job throughout their Peace Corps service.

We found significant changes (p. $< .05$, two-tailed) in attitudes and perceptions during service on 12 of 48 items, and near-significant changes p. $< .10$, two-tailed) on four. In summary, we found the Volunteers increased their estimate of the potential of Colombia, the country of service, for social progress in regard to a high standard of living and level of education; grew more worried over their technical competence to advise teachers and more dissatisfied with their Peace Corps training, both reflecting problems encountered in fulfilling their utilization assignment; increased in desire for changes in the Peace Corps, emphasizing greater staff support overseas for Volunteers; increased in self-confidence, as indicated by increases in self-evaluations of organizing and leadership abilities; increased in their belief in the effectiveness of Latin American governments generally, but notably not in regard to Colombia's government; indicated they were disappointed in the number of Colombian friends made during service, although they also indicated that they had made a few friends (but apparently not as many as initially anticipated); expressed increased satisfaction with their project with increased estimates of its effectiveness and likely eventual success; and increased in their belief in the positive role a tourist industry can play in the economy of an underdeveloped country. All of these represent significant changes. The near-significant changes involved: increased satisfaction with their job performance (actually, p. $< .06$, so this was truly marginal); increased belief in the potential of Latin America generally for a high standard of living; and increased belief in the benefits of private U.S. investment abroad to an underdeveloped country. We also found upon termination that these

Volunteers felt their Peace Corps experience had provided them with opportunities for developing skills and abilities they would not otherwise have had, and that they felt they would be able to use their Peace Corps skills and abilities in their later careers.

In Part III, we analyzed the results of a study of changes in attitude among the replacement and original utilization Volunteers over three overlapping months of service -- thus obtaining data on Volunteer change during the first and last months of service. In this study we measured the meaning to the Volunteers of 16 Colombia-, Peace Corps-, education-, and self-related concepts on a 21-scale version of Osgood's semantic differential. Each Volunteer group rated the concepts twice -- for the replacement Volunteers, at the beginning and again at the end of three months of service overseas, and for the original Volunteers, at about 18 months overseas service and again at termination three months later. Although the quantity of data derived was enormous (16 concepts each rated on 21 scales twice by two different groups, for a total of 1,344 measurements), the trends were so clear that the results were readily interpretable.

The concepts were: "Colombian Government," "Colombian Reliability," "Colombian Interest in Education," "Colombian Educational Methods," "Colombian Classrooms," "Television Teacher," "Classroom Teacher," "Peace Corps," "Peace Corps Staff," "Peace Corps ETV Project," "Peace Corps ETV Shows," "Volunteer Living Allowance," "Peace Corps Volunteer," "Myself," "Teaching School," and "Instructional Television in Schools."

The results for the replacement Volunteers have great interest because they reflect the impact of service on impressions largely formed by Peace

Corps training, and can be construed as a test of the accuracy and viability of those impressions.

We found:

1) The replacement Volunteers underwent markedly more change than the original Volunteers, confirming the view that the first months are a period of taking stock.

2) The replacement Volunteers concentrated their changes on concepts relating to the Peace Corps and Colombia, while the original Volunteers changed considerably on concepts of broad relevance ("Teaching School," "Instructional Television in Schools"), indicating that each group was taking stock on concepts relevant to their immediate futures.

3) The replacement Volunteers shifted primarily in regard to eight concepts: "Colombian Government," "Colombian Interest in Education," "Colombian Educational Methods," "Colombian Classrooms," "Television Teacher," "Peace Corps Staff," "Peace Corps ETV Shows," and "Peace Corps Volunteer."

4) The significant changes among the replacement Volunteers were overwhelmingly negative, with only one out of a total of 94 in a positive direction. Thus, the concepts on which their changes were concentrated can be regarded as areas of particular disenchantment for which training did not paint an accurate picture.

5) There was little support for the contention that the first or last months are periods of heady personal reexamination, for there were few significant changes on the personal concept "Myself." This is particularly noteworthy for the replacement Volunteers in their first months, for whom there were numerous changes on many other concepts. The replace-

ment Volunteers changed quite a bit in regard to "Peace Corps Volunteer," indicating that reexamination largely concerns role rather than self, and is more frequent in the early months.

6) The replacement Volunteers were generally more favorably oriented toward Colombia- and Peace Corps-related concepts on arrival than the original Volunteers at the 18-month point. The replacement Volunteers' negative changes reduced the difference, but did not obliterate it entirely.

We suggested that the replacement Volunteer results have implications for Peace Corps training and project operation. In regard to training, we argued that it should inoculate the Volunteer against disenchantment by providing information sufficiently accurate and detailed to lead to the forming of impressions that will withstand the test of reality overseas, and that the use of former Volunteers from a project was one way to supply such information. In regard to project operation, we suggested that since the first months are a time of testing impressions against reality it is also a period when information about a project is particularly crucial for a Volunteer.

FOOTNOTES

[1] Our figures on numbers of Volunteers in this report differ slightly from those in the personnel summaries of Report No. 1 (*), this series, because the latter are an estimate of the number of full-time persons (or the equivalent) working in the project over a whole semester.

[2] For a detailed outline of the ETV Project's growth and development over its first three years, 1964-1966, see Report No. 1 (*), this series.

[3] Robert E. Krug and Mitzi M. Wertheim, "On Overseas Attrition," Research Notes No. 11 (Washington: Division of Research, Peace Corps, October, 1965).

[4] Osgood, Charles E., Suci, George J., and Tannenbaum, Percy H. The Measurement of Meaning (Urbana: University of Illinois Press, 1957).

[5] For a technical discussion, see Harman, H.H., Modern Factor Analysis (Chicago: University of Chicago Press, 1960).

[6] For a thorough review of the semantic differential technique, see Osgood, op. cit.

[7] Westley, Bruce H., and Jacobson, Harvey K. Modern Math on TV: Its Impact on Pupils and Teachers (Madison: University of Wisconsin Television Laboratory, Research Bulletin No. 15, December, 1963).

Appendix A: The Initial Volunteer Questionnaire

Items are keyed to variables in Table 9:2 except for demographic items, which are omitted.

Volunteer No.:__________

Peace Corps Volunteer Questionnaire

Instructions: As you will see, this questionnaire is concerned with those issues with which active Peace Corps service might be expected to involve a Volunteer. Specifically, it deals with questions of social change, dealing with non-Americans, and the Volunteer's current job in Colombia. Purposely, it eschews questions of personality and psychology.

In regard to the scales labelled only at their end-points, place a mark at the point on the scale most closely approximating your opinion. Consider these scales as continuums, running generally from negative to positive. In regard to the queries which follow the scales, reply as fully as your views dictate.

The number in the upper right-hand corner provides sufficient identification for our files. It is not necessary to put your name on this questionnaire. To help us in our effort to keep your replies confidential, please return the questionnaire in the envelope provided. Seal it. Send it to: George Comstock, Cuerpo de Paz, Research Project, Embajada Americana - Bogota, D.E. Please send it no later than February 21.

Part 1: Problems and agencies of social change

Item I.D. in Factor Analysis*

1) Taken as a whole, how effective do you consider regular non-Peace Corps government agencies in their work with other countries?

(1) Not at all effective ____ ____ ____ ____ ____ ____ ____ Very effective

Why do you feel this way? ______________________________

____

Would you want to make changes in the way these agencies work?

(2) No, none at all ____ ____ ____ ____ ____ ____ ____ Yes, many changes

If you would make changes, what would they be? ____________________

____

* Key to Table 9:1.

2) How effective do you consider the Peace Corps as a whole at accomplishing its assigned tasks?

(3) Not at all effective _____ _____ _____ _____ _____ _____ _____ Very effective

Why do you feel this way? ______________________________________

____

Do you think changes should be made in the Peace Corps as a whole?

(4) No, none at all _____ _____ _____ _____ _____ _____ _____ Yes, many changes

If changes should be made, what should they be? ______________________

____

3) On the whole, how effective is the Peace Corps educational television project in Colombia?

(5) Not at all effective _____ _____ _____ _____ _____ _____ _____ Very effective

Should changes be made in the television project's operations in Colombia?

(6) No, none at all _____ _____ _____ _____ _____ _____ _____ Yes, many changes

If changes should be made, what should they be? ______________________

____

4) To what extent do you think the United States should try to help solve the problems of other countries?

(7) The United States should keep "hands off" _____ _____ _____ _____ _____ _____ _____ The United States should make a great effort

Why do you think so? ____

____

Would you say the same thing about the Federal government and aid to groups within the United States afflicted by poverty, disease, and ignorance?

(8) _____ No, give more help _____No, give less help _____Yes, the same

If you would not say the same thing about Federal aid in the United States, why not?____

____

5) When the United States does try to help other countries solve their problems, how great do you think its financial assistance should be?

(9) The United States should pay as little of the bill as possible ____ ____ ____ ____ ____ ____ ____ The United States should pay the full bill

Why do you feel this way? ____

____

6) When the United States does try to help other countries solve their problems, do you think the United States should provide the full staff necessary for the project, or only part of the staff? Should the United States undertake to direct the project, or should authority rest jointly with the United States and the aided country, with neither having final authority? Or should final authority rest with the host country?

a) The U.S. ____ should provide the full staff ____ should provide only a part of the staff

(10) b) The U.S. ____ should direct the project ____ should share authority jointly ____ should accept host country's authority

Why do you feel this way? ____

____

7) When the United States does undertake an aid project in a foreign country, should it "try every trick in the book" in dealing with the aided country to make the project a success, or should it depend on what the aided country will do readily without pressure?

(11) The U.S. ____ should depend on what the aided country will do readily
____ should "try every trick in the book"

Comment ____

____

8) In general, do you think a big tourist industry benefits an "underdeveloped" nation?

(12) Does not benefit it at all ____ ____ ____ ____ ____ ____ ____ Benefits it greatly

Why do you feel this way? ____

____

9) In general, do you think United States private business activity in an "underdeveloped" country benefits it?

(13) Does not benefit it at all ____ ____ ____ ____ ____ ____ ____ ____ Benefits it greatly

Why do you feel this way? ____

____

10) In regard to Peace Corps project, what type of project do you think is of the greatest benefit to other countries? Of the least benefit?

____

____

Part II: The Peace Corps Volunteer and the job in Colombia

1) What do *you* consider to be your role in the Peace Corps here in Colombia?

____

____

How important do you consider your particular job to be in the overall ETV project?

(14) Not at all important _____ _____ _____ _____ _____ _____ _____ Very important

How much in the "mainstream" of Peace Corps ETV activity do you find yourself?

(15) Not at all in the "mainstream" _____ _____ _____ _____ _____ _____ _____ Very much in the "mainstream"

2) What degree of success do you predict for the Peace Corps ETV Project in Colombia?

(16) Very little success _____ _____ _____ _____ _____ _____ _____ Very great success

Why do you feel this way? ____

____

Taking everything into account, how successful do you feel you have been to date in performing your job?

(17) Not at all successful _____ _____ _____ _____ _____ _____ _____ Very successful

Whatever the outcome of the television education program itself, how great a contribution to Colombia do you think the ETV effort constitutes?

(18) No contribution at all _____ _____ _____ _____ _____ _____ _____ A very great contribution

Why do you feel this way? ____

____

3) If you were asked to take over an unfamiliar new job in the project, how well do you think you could handle it?

(19) Not at all well ____ ____ ____ ____ ____ ____ ____ Very well

Comments ____

____

If you were assigned a difficult and important problem to solve connected with a Peace Corps job, would you be inclined first to think out a possible solution, providing you had the necessary information, before seeking help from someone higher in authority? Or would you be inclined first to seek consultation and advice before attempting a solution?

(20) Would be inclined to: ____ first think out a possible solution

____ first seek counsel and advice

Comments ____

____

4) As a Peace Corps Volunteer, is there any information you would like to have now that you do not have?

(21) ____ Yes ____ No

If there is some information you would like, what is it?____________

____

5) As a Peace Corps Volunteer, is there any person (s) with whom you would like more contact at this time?

(22) ____ Yes ____ No

If yes, what person (s)? ____________________________________

____

6) In general, how well did your Peace Corps training prepare you for the situations you have encountered here in Colombia?

(23) Not at all well ____ ____ ____ ____ ____ ____ ____ Very well

What particular aspects of your training, if any, have proved most helpful? ____

____

What particular aspects of your training, if any, have proved to have little utility? ____________________________________

____

What particular omissions or deficiencies in your training, if any, have you discovered? ____

____

7) What particular incident thus far would you single out as having presented you with the greatest challenge as a Peace Corps Volunteer?

Please describe ____

____

8) Outline your solutions to the following hypothetical situations:

A) A Colombian with whom you must cooperate, and who has authority over other Colombians with whom you must work, insists on doing a job in a way you feel certain is not the most effective possible. In Peace Corps eyes, the responsibility for the job is yours.

I would ____

____

B) After waiting a long time to board a bus, a Colombian squeezes into line ahead of you.

I would ____

____

C) To do an absolutely first rate job, your specific Peace Corps assignment demands your full time, yet spending some time in other activities clearly can greatly help some Colombians.

I would ____

____

9) If you are in the ETV utilization group, how skillful a teacher would you say you are at this time?

(24) Not at all skillful ____ ____ ____ ____ ____ ____ ____ Very skillful

If you are in the ETV programming and production group, how skillful a television worker would you say you are at this time?

Not at all skillful ____ ____ ____ ____ ____ ____ ____ Very skillful

If you are in the ETV technical group, how skillful a television technician would you say you are at this time?

Not at all skillful ____ ____ ____ ____ ____ ____ ____ Very skillful

10) At this time, how proficient would you say you are in speaking Spanish?

(25) Not at all proficient ____ ____ ____ ____ ____ ____ ____ Very proficient

In writing Spanish?

(26) Not at all proficient ____ ____ ____ ____ ____ ____ ____ Very proficient

In reading Spanish?

(27) Not at all proficient ____ ____ ____ ____ ____ ____ ____ Very proficient

How much progress in learning Spanish would you say you have made since joining the Peace Corps?

(28) Very little ____ ____ ____ ____ ____ ____ ____ A great deal

11) Compared to the people you knew before entering the Peace Corps, how would you say you stand in regard to the following abilities? (Place a mark where you think you would fit if these people were ranked from least to most able.)

Organizing others:

(29) (Least able at organizing) ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ (Most able at organizing)

Leading others

(30) (Least able at leading) ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ (Most able at leading)

Cooperating with others:

(31) (Least able at cooperating) ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ (Most able at cooperating)

12) How do you feel about the following? (Place a check in the appropriate column for each item.)

		A serious problem	A minor problem	No problem at all	If you checked "serious problem" explain here:
(32)	a) Support from Colombian officials				
(33)	b) Ability to communicate in Spanish				
(34)	c) Health				
(35)	d) Ability to see results				
(36)	e) Living allowances				
(37)	f) My technical skills for the job				
(38)	g) Keeping "problem" Volunteers in Colombia				
(39)	h) Amount of visits, attention from staff				
(40)	i) Friendliness of local people				
(41)	j) Dangers other than health				
(42)	k) Other problems (write in:)				

What are your personal goals in the following areas, once Peace Corps service is over?

Education: ____

____

Career: ____

____

Family: ____

____

How would you describe the life you hope to live after leaving the Peace Corps? ____

____

What interests outside your job do you hope to pursue? __________

____

Have these goals changed since joining the Peace Corps?

(43) _____ Yes, they have changed _____ No, they have not changed

If they have changed, in what ways have they changed? __________

____

Part III: Looking at non-Americans

1) How many Colombian friends do you expect to make before your Peace Corps service here ends?

(44) Only a few Colombian friends _____ _____ _____ _____ _____ _____ _____ A great many Colombian friends

How many Colombian friends would you say you have made so far?

(45) Only a few Colombian friends _____ _____ _____ _____ _____ _____ _____ A great many Colombian friends

How deep and lasting do you expect these friendships to become?

(46) Not at all deep & lasting _____ _____ _____ _____ _____ _____ _____ Very deep & lasting

2) How effective in solving problems would you say the Colombian government is?

(47) Not at all effective ____ ____ ____ ____ ____ ____ ____ Very effective

How great a potential would you say Colombia has for a generally high standard of living for its people?

(48) Very slight potential ____ ____ ____ ____ ____ ____ ____ Very great potential

How great a potential would you say Colombia has for democratic, responsive government?

(49) Very slight potential ____ ____ ____ ____ ____ ____ ____ Very great potential

How important to the welfare of Colombia would you say the acceptance of a single strong leader is?

(50) Not at all important ____ ____ ____ ____ ____ ____ ____ Very important

How great a potential would you say Colombia has for ultimately achieving a generally high level of education for its people?

(51) Very slight potential ____ ____ ____ ____ ____ ____ ____ Very great potential

What do you consider to be Colombia's greatest problem? How would you solve it?____

____

3) How effective in general would you say the governments of Latin American countries are in solving problems?

(52) Not at all effective ____ ____ ____ ____ ____ ____ ____ Very effective

How great a potential would you say Latin American countries in general have for generally high standards of living for their peoples?

Very slight potential ____ ____ ____ ____ ____ ____ ____ Very great potential

How great a potential would you say Latin American countries in general have for democratic, responsive government?

(54) Very slight potential _____ _____ _____ _____ _____ _____ _____ Very great potential

How important to the welfare of Latin American countries in general would you say the acceptance of a single strong leader is?

(55) Not at all important _____ _____ _____ _____ _____ _____ _____ Very important

How great a potential would you say Latin American countries in general have for ultimately achieving a generally high level of education for their peoples?

(56) Very slight potential _____ _____ _____ _____ _____ _____ _____ Very great potential

4) How would you describe the average Colombian? ______________________________

____

5) How would you describe the average Colombian's ideas about Peace Corps Volunteers? ______________________________

____

____

IV: Commentary

This space is reserved for your additional comments either on the issues raised by the questions or on the questionnaire itself. You may attach additional sheets if you wish.

Appendix B: Semantic Differential Instructions and Rating Form

The order of scales on the rating form and the left-to-right ordering of adjective pairs were varied randomly between administrations. Within each administration, the rating form was the same for all concepts.

INSTRUCTIONS FOR USE OF GENERAL EVALUATIVE SCALES

The purpose of this study is to measure the meanings certain concepts or "things" have for you at this time. This is done by asking you to evaluate these things on a series of descriptive scales. You should make your judgments on the basis of what these things mean to you. On each of the pages which follow these instructions, you will find at the top a different concept to be judged, and beneath the concept a set of scales. You are to rate the concept on each of these scales in order. Make a rating on every scale, and on each scale make only one rating.

Each scale consists of seven points, with its ends labelled with verbal opposites, such as this:

Good _____ _____ _____ _____ _____ _____ _____ Bad

For each of the concepts you are to judge, there are a number of these scales, each involving a different pair of opposing adjectives.

Here is how you are to use these scales:

If you feel that the concept at the top of the page is very closely related to the word at the end of a scale, you should place your check-mark as follows:

fair __X__ _____ _____ _____ _____ _____ _____ unfair

OR

fair _____ _____ _____ _____ _____ _____ __X__ unfair

If you feel that the concept is quite closely related to one or the other end, you should place your check-mark as follows:

strong _____ __X__ _____ _____ _____ _____ _____ weak

strong _____ _____ _____ _____ _____ __X__ _____ weak

If the concept seems only slightly related to one end, as opposed to the other, then you should place your check-mark as follows:

active _____ _____ __X__ _____ _____ _____ _____ passive

OR

active _____ _____ _____ _____ __X__ _____ _____ passive

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most appropriate to the thing you're judging.

If you consider the concept to be a) neutral on the scale, b) both sides of the scale equally associated with the concept, or c) if the scale is completely irrelevant and unrelated to the concept, then you should place your check-mark in the middle space:

safe _____ _____ _____ __X__ _____ _____ _____dangerous

IMPORTANT: (1) Place your check-marks in the middle of spaces, not on the boundaries:

This Not this
_____ _____ _____ __X__ _____X_____ _____

(2) Be sure you check every scale for every concept -- DO NOT OMIT ANY.

(3) Never put more than one check-mark on a single scale.

Sometimes you may feel as though you've had the same concept before on this "test". This will not be the case. Do not try to remember how you checked similar concepts earlier. Make each item a separate and independent judgment, and work at fairly high speed. This should take only a very few minutes. Do not worry or puzzle over individual ratings. It is your first impressions, your immediate "feelings", that we want.

PEACE CORPS

large	___ ___ ___ ___ ___ ___ ___	small
active	___ ___ ___ ___ ___ ___ ___	passive
hard	___ ___ ___ ___ ___ ___ ___	soft
strong	___ ___ ___ ___ ___ ___ ___	weak
interesting	___ ___ ___ ___ ___ ___ ___	uninteresting
slow	___ ___ ___ ___ ___ ___ ___	fast
complex	___ ___ ___ ___ ___ ___ ___	simple
inexpert	___ ___ ___ ___ ___ ___ ___	expert
deep	___ ___ ___ ___ ___ ___ ___	shallow
calming	___ ___ ___ ___ ___ ___ ___	exciting
foolish	___ ___ ___ ___ ___ ___ ___	wise
good	___ ___ ___ ___ ___ ___ ___	bad
cruel	___ ___ ___ ___ ___ ___ ___	kind
meaningful	___ ___ ___ ___ ___ ___ ___	meaningless
organized	___ ___ ___ ___ ___ ___ ___	disorganized
useful	___ ___ ___ ___ ___ ___ ___	useless
sharp	___ ___ ___ ___ ___ ___ ___	dull
old	___ ___ ___ ___ ___ ___ ___	new
easy	___ ___ ___ ___ ___ ___ ___	difficult
tense	___ ___ ___ ___ ___ ___ ___	relaxed
reassuring	___ ___ ___ ___ ___ ___ ___	frightening

APPENDIX C: Matrix of Volunteer Questionnaire Item Loadings on Extracted Factors

The following table shows the loadings of 64 variables measuring attitudes or demographic characteristics on 21 extracted factors (varimax rotation, extraction halted when Eigenvalues dropped below 1.0). H^2 values = total amount of item variance explained by all extracted factors for each variable. The data are analyzed and discussed in the text (see Part II and Table 9:2). Number of respondents (N) = 79. The data are from the first administration of the Volunteer Questionnaire shortly after the Volunteers began service in the ETV Project in Colombia.

		Factor																				
Item	H^2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1 ..	79	-14	-7	7	-10	-7	5	-9	-17	4	-1	13	-1	11	1	2	3	82	-1	-2	5	-3
2 ..	79	-13	-2	9	52	-21	-1	6	-13	-4	10	-5	1	-3	5	-16	8	-50	-16	8	25	17
3 ..	71	4	24	16	6	9	-23	-6	3	1	-14	20	30	8	-3	1	-9	11	-5	0	47	-40
4 ..	78	-6	-21	-9	24	-23	29	13	-7	-10	3	13	11	29	6	-13	-1	-7	2	1	5	59
5 ..	87	17	10	13	13	-1	-1	-16	3	9	-21	26	71	-8	-5	-8	2	-23	-1	-11	22	-1
6 ..	79	4	16	-2	-4	13	18	6	5	6	-7	11	2	-13	3	10	-10	-1	-4	1	2	80
7 ..	91	-12	1	4	19	-11	-9	-2	4	0	28	-1	0	-18	-3	-29	16	5	17	-13	74	11
8 ..	82	-6	57	2	-11	-4	-3	21	-10	-2	-19	17	1	-28	-4	22	-16	-15	-20	9	-30	-22
9 ..	73	2	-24	16	-3	-2	18	0	-9	-7	-2	2	7	17	-10	7	-6	-7	8	5	73	-2
10 ..	78	14	27	-14	0	-17	13	-10	20	44	17	10	24	-11	8	4	-30	3	6	-35	-17	14
11 ..	80	-4	-6	13	8	5	-18	-15	0	-10	-8	26	48	-55	15	6	1	-1	-5	-1	-8	24
12 ..	74	6	12	-11	10	32	28	-2	7	0	10	17	-5	-19	-35	-6	-22	27	-29	-2	33	0
13 ..	75	4	23	0	3	56	3	-1	-13	-6	13	21	1	-8	-24	-23	20	23	5	16	-6	-24
14 ..	89	4	14	35	41	-5	17	-3	-32	23	1	-21	26	-5	-9	-36	4	26	1	11	6	-24
15 ..	85	0	-5	31	29	-19	5	1	-13	-7	-14	-11	44	-21	8	-40	11	27	14	-8	17	-13
16 ..	77	12	11	16	8	-1	14	6	-4	4	-4	-4	81	1	-3	1	-1	6	-5	-13	1	9
17 ..	80	32	-8	10	30	21	4	6	8	20	-47	2	12	9	-3	-41	14	3	9	22	5	5
18 ..	77	15	0	19	19	-2	-14	12	-15	18	29	-7	57	3	1	-7	16	0	-18	-27	-1	-18
19 ..	79	37	-20	13	19	-13	-34	14	-11	-27	-2	-6	14	11	-20	-3	4	18	-30	-8	-4	3
20 ..	89	-9	87	7	-13	5	0	15	5	2	-11	4	-3	0	-17	1	-9	5	-8	-5	-14	-6
21 ..	88	1	88	-16	-4	-4	4	-1	7	-6	-18	-10	-6	-1	4	6	1	-8	10	-1	-8	-1
22 ..	83	12	77	2	-12	7	15	-8	-3	9	20	-10	18	-2	7	-10	13	-3	10	-5	-6	17
23 ..	72	-3	-18	-1	53	-3	-4	9	-30	9	12	-12	7	-16	-6	-6	-12	13	-9	20	8	-38
24 ..	76	9	12	-1	0	21	3	25	10	52	-22	-21	16	30	-8	-1	23	14	-7	10	4	23
25 ..	91	2	-18	90	-5	6	4	3	-7	-2	9	3	14	2	7	-2	-4	3	1	11	9	-2
26 ..	93	4	-18	93	1	-2	-4	-5	2	2	-1	-5	7	-6	-1	4	2	8	3	6	7	-2
27 ..	90	1	22	89	5	-3	0	-1	-7	-6	1	0	8	-4	-7	7	-6	2	5	9	0	6

Item	H^2	Factor																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
28 ..	77	-19	17	-19	11	-1	0	33	0	-4	-7	12	-8	-13	0	-56	-4	38	15	-10	-6	10
29 ..	83	15	11	0	0	4	9	86	4	-14	3	4	-5	2	3	-9	-2	-6	2	-9	-1	5
30 ..	87	0	10	-2	9	-5	-4	89	14	11	-5	3	4	-2	2	-6	-2	2	1	3	-3	5
31 ..	81	-8	55	5	21	11	-26	27	20	8	-2	21	-13	-22	-16	8	-24	-2	5	20	10	-1
32 ..	82	18	-3	1	33	-8	7	21	-16	-22	-24	9	-16	6	5	35	20	4	-25	-30	4	-36
33 ..	82	14	0	81	8	12	-1	2	-2	2	2	7	4	6	-12	-18	0	-13	8	-19	2	-9
34 ..	82	-3	-9	8	-4	-7	6	-11	-8	-1	-3	-3	-10	5	3	11	0	-4	-5	85	-5	1
35 ..	65	-1	-6	15	4	-3	-3	-6	23	-8	71	2	-12	1	12	7	7	2	3	2	15	-3
36 ..	78	11	6	3	0	80	-5	-1	-5	-6	-13	-7	-1	-3	9	-5	20	3	-9	-12	-2	11
37 ..	83	-9	7	0	-4	11	15	6	9	-84	6	6	6	2	-4	5	-17	0	12	1	5	7
38 ..	89	-4	-1	-10	9	0	0	7	5	5	10	-1	2	7	90	-6	-3	-1	-12	-1	-10	4
39 ..	81	0	54	-11	11	5	-19	-13	2	-7	6	-4	-18	-39	40	-5	-3	13	10	10	13	16
40 ..	78	-7	5	-17	16	2	-4	-33	49	1	6	-15	-10	-17	-13	-9	-39	9	-30	8	-10	7
41 ..	83	5	-3	-3	-7	-29	6	12	-19	28	39	29	23	-8	-37	-20	10	-21	-3	-20	-15	6
42 ..	110	-30	52	-13	-13	17	-7	19	-2	6	49	-48	14	14	-4	-8	-25	-16	-8	0	-12	-5
43 ..	81	-13	73	-7	-17	10	3	16	-8	-2	-18	3	1	31	17	-7	3	-7	5	-6	9	3
44 ..	84	-6	-5	1	88	2	3	0	-8	2	-12	7	6	-8	2	4	-1	-6	10	-4	5	2
45 ..	81	1	-21	-14	60	15	-12	6	2	14	9	33	35	-2	11	-1	12	-5	14	3	-8	15
46 ..	75	10	-16	11	69	0	12	2	38	-9	8	6	5	10	8	3	1	-9	-2	-13	-2	-1
47 ..	76	22	6	3	12	-1	13	11	-9	-10	5	77	8	2	-11	-7	8	8	1	-9	3	-10
48 ..	69	71	25	11	-1	17	8	2	-7	6	-3	-1	6	6	8	3	4	-2	-2	-18	-4	-4
49 ..	81	74	-16	-4	14	-1	-3	-11	-2	0	-1	36	3	15	-6	-2	11	-16	-1	-8	0	3
50 ..	79	12	12	0	13	-7	82	5	9	5	-6	6	0	5	-4	3	2	4	-1	5	10	18
51 ..	84	75	-17	12	15	13	12	2	1	-4	-19	18	23	-6	4	-7	0	-16	14	1	-9	4
52 ..	84	29	-38	-3	0	3	17	5	11	-3	-8	63	7	-13	11	8	-11	30	-8	10	6	-2
53 ..	85	82	25	4	-16	-7	-3	10	-1	-1	16	4	4	-4	-3	-1	-12	10	-2	-5	-3	-8
54 ..	89	86	-25	3	-3	-4	-7	-6	7	13	-5	13	-5	-2	-3	6	-1	3	-12	8	10	-4

		Factor																				
Item	H^2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
55 ..	88	-5	-9	2	-5	1	89	2	0	-17	1	10	5	-3	-1	-13	1	3	-9	0	-4	10
56 ..	80	85	-7	0	-5	4	4	15	-5	2	-1	-8	7	-12	-5	0	-9	-3	2	0	-2	9
57 ..	77	-3	-5	-24	-1	26	11	8	8	-13	11	12	20	0	14	6	39	-12	-58	9	-7	2
58 ..	84	5	4	10	-11	15	11	6	4	4	-5	2	5	18	7	-79	4	-20	-16	-13	12	-8
59 ..	79	-21	-17	3	-18	2	-9	-13	2	9	-24	13	-1	60	1	-14	-18	23	28	-21	0	5
60 ..	59	28	-8	11	22	-21	-3	8	34	-7	-18	-8	-29	13	7	4	-1	12	-9	1	-31	4
61 ..	64	-17	0	-7	10	-12	8	26	55	-1	30	-15	16	7	-8	1	-10	-2	11	-9	-6	-17
62 ..	74	-10	0	-7	5	-16	1	-12	7	23	2	7	5	-7	-5	-1	78	2	-6	0	1	-7
63 ..	79	-3	-5	7	9	0	-5	10	5	-18	7	-8	-7	10	-7	-5	3	1	82	-2	12	0
64 ..	85	-1	6	-10	-3	-2	6	14	84	-1	10	4	-11	-9	11	2	15	-15	3	-5	2	9

Reports In This Series

This series supplants all previous reports on the two years of research conducted on the Peace Corps Educational Television Project in Colombia. There are 12 volumes -- 10 research reports, each dealing with a different aspect of the project, plus *An Introduction*, concerned with the organization and conduct of the research, and a concluding *Overview*, containing a summary of the major findings and some general observations on the project.

The title of the series: *The Peace Corps Educational Television Project in Colombia -- Two Years of Research*.

The individual volumes:

An Introduction to Research Reports No. 1-10.

Report No. 1: The Project as a Whole -- Organization, Expansion, and Adaptation.

Report No. 2: The Project's First Semester -- Pupil Achievement, Teacher Attitudes, and the Work of the Utilization Volunteer.

Report No. 3: Improving the Effectiveness of the Utilization Volunteer and the Utilization of ETV by the Colombian Teacher.

Report No. 4: The Colombian Teacher and the Utilization Volunteer -- Making ETV Work in the Schools of a Developing Country.

Report No. 5: The Day-to-Day Job of the Utilization Volunteer -- Structure, Problems, and Solutions.

Report No. 6: Instructional Television for the In-Service Training of the Colombian Teacher.

Report No. 7: Improving the Effectiveness of Peace Corps Efforts to Change Teacher Behavior.

Report No. 8: The Televised Curriculum and the Colombian Teacher.

Report No. 9: The Volunteers.

Report No. 10: Feedback to the Peace Corps on Project Progress -- Some Models and Suggestion.

An Overview of Research Reports No. 1-10.

BRIEF FACTS

The ETV Project: In 1963, the Peace Corps, with the financial support of the Agency for International Development (AID), agreed to help the Colombian government establish a nationwide educational television (ETV) system directed primarily at improving public education. The initial Peace Corps goal was to provide televised instruction for primary school pupils and their teachers. It was hoped that eventually the system could also provide instruction for adults in literacy, health, agriculture, and topics of general interest, and for students beyond the primary grades. The ultimate Peace Corps goal is to establish an ETV system operated independently by Colombia. The project was inaugurated in Colombia at the beginning of 1964. It has had two major concerns in achieving its initial goal: the production of televised courses, and the building of a receiving network of schools with television in which teachers would build their own teaching around the instructional "core" provided by the telecasts. During the project's first three years (1964-1966), the number of Volunteers assigned to the project by the Peace Corps who have worked closely with Colombians toward these goals has ranged from 66 to 88. Of these, about half a dozen have been concerned with the installation and maintenance of TV sets in schools, between slightly more than half to two-thirds working with teachers in schools on making ETV more effective, and the rest with the production of telecasts. During the first year, 10 courses were telecast for pupils, each consisting of two 15 minute telecasts a week, for a weekly total of 300 minutes, exclusive of repeated programs; during 1965 and 1966, 15 such courses were telecast, for a weekly total of 450 minutes exclusive of repeated programs. In addition, individual programs and short courses have been telecast for teachers. When telecasting began in February, 1964, the receiving network encompassed approximately 200 schools, 1,000 teachers, and 38,000 pupils; by the end of 1964, 500 schools, 4,025 teachers, and 153,000 pupils; by the end of 1965, 925 schools, 7,000 teachers, and 260,000 pupils; and by the end of this year, 1,250 schools, 8,500 teachers, and 350,000 pupils. Telecasting has been over the open network of the Instituto de Radio y Television, a semi-government agency which telecasts commercially in the evenings, and which also has provided studio facilities for ETV. To achieve its ultimate goal, the Peace Corps has been concerned with building a permanent, financially viable, and competent organization to assume the Volunteers' functions. At present, Peace Corps participation is planned to continue up to the middle of 1968. For more on the ETV Project itself, see Report No. 1: The Project as a Whole -- Organization, Expansion, and Adaptation, this series.

The Research: Because Colombia was the first country in which the Peace Corps undertook an educational television (ETV) project, it decided to provide for close, thorough, and continuing research, and late in 1963 contracted with Stanford University's Institute for Communication Research. The Institute maintained a staff in Colombia actively engaged in research for the first two years of the ETV Project, from January, 1964, through January, 1966. The titles of the final series of reports on its studies appear on the previous page. For more on the research as a whole, see An Introduction to Reports No. 1-10, this series.